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TAXES AND AGRICULTURE

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TAXES AND AGRICULTURE

THURSDAY, MAY 10, 1984

Congress of the United States,
Joint Economic Committee,
Washington, DC.

The committee met, pursuant to notice, at 10:05 a.m., in room SD-538, Dirksen Senate Office Building, Hon. Roger W. Jepsen (chairman of the committee) presiding.

Present: Senators Jepsen and Abdnor.

Also present: Dan C. Roberts, executive director; Charles H. Bradford, assistant director; and Dale Jahr and Robert J. Tosterud, professional staff members.

OPENING STATEMENT OF SENATOR JEPSEN, CHAIRMAN

Senator Jepsen. The committee will come to order.

On behalf of the committee, I would like to welcome our four very distinguished witnesses. We are honored to have such an expert panel to discuss a very complicated issue which affects all Americans—taxation. Today we are afforded some luxury of time, because the Congress is not deliberating legislation pertaining to our theme of how taxation affects the farm sector. Hence, we are given the opportunity to review and evaluate the topics discussed.

In light of calls for raising revenue, proposals for new tax structure, tax fairness and abuse, and calls for the closing of tax loopholes, our hearing will make a timely and important contribution to the debate. Agricultural tax policy, we can all be assured, will not escape indepth administration and congressional scrutiny. In addition, as a continuation of this committee's agricultural initiative, it is my hope that our hearing makes another contribution to the congressional process leading to the 1985 farm bill.

Taxation and the economic effects of taxation are, by nature, technical topics. Because of this it is important to develop a framework for discussion. Two questions come to mind which I think are important. First, how do taxes affect the structure of agriculture? That is, how has the Tax Code altered the size of farms and techniques of farming? Second, how are taxes distributed in agriculture? That is, who pays the tax and what is the burden? In fact, the distribution of tax burdens and benefits may extend beyond farmers.

I have an ambitious list of subjects for our witnesses, and I would like to outline them in brief. One, an overview of the economic consequences of taxation as it affects agriculture; two, a review of alternative tax structures and their probable effect on the farm sector; and three, a discussion of tax shelters in agriculture.

This final subject deserves additional comment to avoid misunderstanding. Not all farm investment is made by farmers, just as steel industry investment is not made only by steel workers. And sometimes that investment occurs either to minimize current tax liability or to defer it. Because of this, I feel it is very important to discuss how tax-sheltered investment by nonfarmers affects bona fide full-time, middle-sized family farm operations.

Tax sheltering can have two effects on the farm sector. First, and generally speaking, investment usually leads to increased production. Hence, if farm investment by nonfarmers occurs due to sheltering, and the resulting extra production occurs during a time of surpluses, prices can fall, jeopardizing farms that are in a cash flow pinch. This scenario should sound familiar to all of us. Second, tax sheltering, by definition, results in a loss of revenue to the Treasury at a time when those revenues are needed desperately.

Again, I stress that our discussion of tax shelters is not an indictment against them. I merely mean to shed some light on what they do for or to full-time farmers.

In conclusion, members of this committee and of the Congress realize that taxes are strong policy tools which have a dramatic effect on the performance of the U.S. economy and the behavior of producers and consumers. It is my intention to see that our tax policy is guiding agriculture in the right direction so that farmers and all Americans benefit from our agricultural progress.

I now welcome and recognize the distinguished Senator from South Dakota, Senator Jim Abdnor.

OPENING STATEMENT OF SENATOR ABDNOR

Senator **Abdnor**. Thank you, Mr. Chairman. I'm going to be brief because I am anxious to hear from the experts on the topics we're discussing. Mr. Harl, I read the article in the Des Moines Register appearing last week. All of you gentlemen with all your expertise should be doing the talking. We should be listening to you. But I do have a brief statement.

I want to commend Senator Jepsen, our chairman, for calling this hearing and I certainly want to tell you how much we appreciate our witnesses' willingness to come and testify. Taxes have an air of mystery to them because the rules governing them are complex. Ordinary people have difficulty figuring them out these days. I used to do my income taxes years ago when I was a young man on a farm in South Dakota but I gave that up.

It is my hope that our hearing will give us all a better understanding on how taxes affect agriculture. Today's farmers in addition to being effective soil and livestock technicians, must be sharp financial analysts as well. And part and parcel of money management is tax management.

Farms, as business operations, have been subjected to dramatic changes in economic conditions. In the 1970's, agricultural exports expanded dramatically and the farm sector responded by increasing production. Regrettably, just as farm investment increased to accommodate greater demand, the U.S. economy was hit by inflation and high interest rates, disrupting farm finances. Generally speaking, farmers now are managing larger operations and much larger cash flows than in the past, requiring them to be much more conscious of their tax exposure.

One of our topics today is challenging indeed—tax shelters. In particular and most distressing are abusive tax shelters. The term "abusive" generally refers to overstated deductions or the absence of economic value in a business. Let me share a little background in this area and my involvement in it. First of all, this is not unique to agriculture. As a matter of fact, of the tax shelters identified and under examination by the Internal Revenue Service, less than 3 percent are farm related. But that amounts to some 9,700 farm tax shelters.

The U.S. Department of Agriculture in a recent study included some revealing information about tax sheltering of off-farm income. And you gentlemen, being the experts you are, probably already were aware, but it was shocking to me. In 1976, there were 12,000 tax returns showing farm losses exceeding $50,000. For these returns, average off-farm income was $122,000 and the average farm loss was $104,000, resulting in an adjusted gross income of about $16,000. You can imagine how much revenue the Treasury lost as a result of this. Even more astounding from that 1976 IRS data is this: the average returns reporting farm net loss had adjusted gross income exceeding 75 percent of farms reporting net profits. Of course, we do not know how much of this sheltering is excessive or abusive and how much is legitimate. But it seems to me that reasonable people would not throw $100,000 away. There must be a payoff there somewhere or you wonder why they would be doing it.

This leads me to question how this tax sheltering affects midsized, full-time family farmers who do not earn large sums of income off the farm. That is my ultimate interest, and as I became more involved with this issue it occurred to me that we have a considerable number of individuals who are more interested in farming the Tax Code than they are in actual farming. Before the verdict is announced, it is clear to me that we need more evidence.

During the debate on the deficit reduction a few weeks ago, I discussed an amendment which would limit the amount of farm loss deductions that could be taken from off-farm income. I suggested that limiting deductions to $21,000—or approximately the U.S. median household income—may be a fair and equitable proposal, especially since full-time, midsize farmers cannot take similar, large deductions against income. You can imagine how surprised I was when I learned that the Joint Committee on Taxation revenue estimate was $2.6 billion over 3 years. Obviously a sizable amount of off-farm income is being sheltered, it was astounding for me to learn that in 1981 the Treasury would have been billions of dollars ahead if the farm sector neither paid any tax at all nor was allowed any deductions.

As a result of my participation in the tax bill, Senator Dole agreed to involve the tax authorizing committee, the Finance Committee, in this subject so that Congress can study this issue carefully and in detail.

In the coming months it is my hope that we can ascertain how farming and farmers are affected by our tax laws. And you gentlemen are the ones to get us off on the right start. You're the experts in the field.

If we're all wrong with statements like I'm making here, I still want to hear your thoughts.

I just want to say that I'm very pleased that you are here and, again, commend our good chairman, Senator Jepsen, for having the foresight in bringing these people here. Thank you very much.

Senator JEPSEN. Thank you, Senator.

I would advise the witnesses that your written statements will be entered into the record as if read. Therefore, you may proceed in any manner you so desire, either by summary or you may read it totally. I would expect what we will do this morning, if there's no objection from the panel, is to hear the entire panel's remarks and then go to questions.

We will start with Mr. Carman, professor of agricultural economics, University of California. Mr. Carman, I thank you for coming. You have made the longest journey so I think it may be appropriate for you to go first. You may proceed.

STATEMENT OF HOY F. CARMAN, PROFESSOR OF AGRICULTURAL ECONOMICS, UNIVERSITY OF CALIFORNIA, DAVIS

Mr. CARMAN. Good morning, Mr. Chairman and members of the committee. My name is Hoy Carman, and I'm a professor of agricultural economics at the University of California, Davis, where I teach in the area of managerial economics and marketing.

My research has been on the topics of agricultural marketing and the effects of taxes on agriculture. The latter research topic has been one of my areas of interest since about 1968.

I'm pleased that this committee is concerned with the importance of taxes to the agricultural sector. There is a growing impression among professionals interested in agricultural finance that income tax provisions are becoming as important to the survival and growth of many farm firms as are commodity programs.

Despite this importance, there is little evidence that agricultural policy and tax policy have been coordinated. There is a growing need for such coordination.

Special farm tax provisions in recent tax law changes tend to increase production. This is consistent with low food prices, but may run counter to agricultural policy goals related to farm structure and rates of return to agricultural investments.

The tax incentives which form the basis for tax-sheltered investments in agriculture have been with us for some time. The mechanics of such investments are well known and we are becoming aware of some of the impacts. There have been a number of tax reform efforts directed toward nonfarm investment in agriculture. These efforts have sought to preserve investment incentives for legitimate farmers while restricting their use by others—that is the illegitimate farmers.

Restriction of large-scale public offerings of tax-sheltered investments in agriculture was well justified, since in general they benefited neither agriculture nor the investors. They did provide some attractive returns to organizers and promoters and the people that were selling them.

I have submitted a prepared statement which outlines some of the effects of income tax incentives in agriculture. For some situations we've been able to develop quantitative estimates of the impacts. For others, we know the direction of change but cannot separate the effects of taxes from other factors such as inflation and interest rates.

There is a relationship between income tax incentives and the structure of agriculture but the results can be mixed. Tax incentives in recent tax law changes tend to increase cash flow and encourage the growth of commercial farms. This results in larger and fewer commercial farms. At the other end of the spectrum there is a movement toward urban farming as a lifestyle which is encouraged by tax incentives.

Preliminary results of the 1982 census of agriculture indicate that the number of California farms increased by 9,274 between 1978 and 1982. At the same time, there was a 6,700 increase in the number of farm operators who reported a principal occupation other than farming. We now face the situation in California where more than one-half of our farms are operated by nonfarmers. Almost three-fourths of these farms operated by nonfarmers had total sales of less than $10,000. I suspect that many of the farm tax returns with losses deducted from other income come from this group of farms.

Changes in tax rules can have both expected and unexpected results which persist over a long period of time. For example, the citrus provision—which requires capitalization of development costs—in the Tax Reform Act of 1969, did help to curtail tax motivated development of citrus. This provision was extended to almost a year later and had a similar effect there. At the same time, it shifted developer interest to other perennial crops where the effects continue. The acreage and production of several perennial crops increased as a result of the citrus provision and remained higher than if capitalization were required for all crops. I'm thinking specifically here of grapes and walnuts in which there was a definite increase in the acreage of those two crops after the Tax Reform Act of 1969 shifted interest from citrus. I believe that the citrus provision has also contributed to long-term instability for other perennial crops such as grapes and walnuts.

Recent reductions in depreciation lives for orchards and vineyards under the accelerated cost recovery system will compound the problem. Full cost recovery in 5 years rather than over a life of 20 or 30 years has increased investor interest in orchards and groves and will likely set some longrun adjustments in motion. I think these longrun adjustments are not in the best interests of our agricultural industry.

I am in favor of two tax law changes for perennial crops—these are to, first of all, require capitalization of development costs for all of these crops, not just for citrus and almonds, and, second, to increase the cost recovery period from 5 years to 15 or 20 years so that it would be consistent with the recovery period for real estate, which tends to be liberal in any event.

Given the level of returns to agriculture, one must hesitate recommending any change which would increase taxes. However, there is evidence that the tax incentives which provide short-term benefits to the individual farmer may result in a deterioration of longrun returns because of increased total production and inelastic demand.

Leaders of several commodity groups—for beef cattle, dairy, hogs, poultry, and orchard crops—have questioned tax incentives that affect their industry, but they continue to support them for their membership. As an aside, the tax incentives interact with other factors to increase dairy output, for example, while there is a desire to reduce milk production.

Also, in this connection, some pork producers who worked to have single purpose structures eligible for investment tax credits also question their longrun impact on their industry.

As a final note, tax rules and provisions have become so complex that most farmers and ranchers are forced to utilize the professional services of lawyers or accountants. I would hope that when we are thinking of changes and so on that we would give simplification a high priority when considering reform proposals.

Thank you for the opportunity to speak before you. Some of the things that I've mentioned are expanded upon in the prepared statement that I have submitted. Thank you.

[The prepared statement of Mr. Carman, together with additional material, follows:]

PREPARED STATEMENT OF HOY F. CARMAN

Income taxes and income tax provisions play an increasingly important role in the investment and operating decisions of U.S. farmers and ranchers. To be successful, the astute agricultural manager must be aware of the income tax consequences of decisions concerning choice of accounting methods and legal structure, investments in land, buildings, machinery, perennial crops and livestock, finance, marketing, participation in commodity programs and operating practices. There is a growing impression among professionals interested in agricultural finance that income tax provisions are becoming as important to the survival and growth of many farm firms as are agricultural commodity programs.

Policy makers are also concerned with income taxes and producers' responses to tax provisions. They clearly perceive that changes in tax rules will significantly alter savings and investment behavior. Many policy makers also see a link between tax law changes and the changing structure of agriculture. Despite the growing importance of income taxes, there is little evidence of attempts to coordinate changes in tax provisions with agricultural policy. Such coordination is needed to prevent obvious conflicts between changing income tax provisions and agricultural policy goals.

The following sections of this paper will (1) summarize some of the general effects of tax provisions on investments, (2) discuss special farm tax provisions and tax shelter investments in agriculture, and (3) examine some of the actual and potential impacts of tax law changes. The concluding section will outline some areas where changes in tax provisions may be warranted.

Producers' Response to Tax Provisions

Income tax provisions and rules which have been changed to influence investment behavior include depreciation, the investment tax credit, capital gains taxes, the deduction of interest payments and marginal tax rates.

Depreciation rules influence investment behavior if there is a difference between tax deductible depreciation and economic depreciation. The usual case, depreciation for tax purposes which is faster than economic depreciation, tends to bias technology toward the use of longer lived assets, other factors equal. On the other hand, the investment tax credit as presently structured favors shorter-lived (three to five year) assets since more frequent replacement involves more frequent use of the credit.

Capital gains tax rates which are lower than ordinary income tax rates encourage investment in assets with appreciation potential which qualify for capital gains tax treatment. In agriculture, favored assets have included land, orchards and livestock. Tax rate reductions for capital assets will tend to increase their value relative to other assets. Boehlje, for example, demonstrates that tax rate reductions will tend to increase bid prices for appreciating agricultural land. Since interest payments on debt are tax deductible expenses while the opportunity cost of interest on equity financing is not, tax laws favor debt financing.

Dean and Carter demonstrated that the imposition of progressive income taxes will reduce the optimum scale of a farm firm. Likewise, one can show with budgeted examples (Carman, 1972), that tax rate reductions will tend to increase the optimum scale of an operation. Differential tax rates by legal form (individual vs. corporate tax rates) will influence the structure of agriculture. Boehlje and Krause analyzed the effect of reduced taxes for small corporations effective in 1979. Their results indicate that incorporation can facilitate estate planning and transfer and reduce total taxes for farms with net incomes greater than $25,000 to $30,000. This differential is especially attractive to large growth-oriented farms.

Tax Shelter Investments

Special farm tax rules combined with the tax provisions discussed above combine to offer opportunities to shelter income through agricultural investments. The special income tax rules applicable to agriculture include: (a) the use of cash accounting; (b) the immediate deductability of some expenses of a capital nature; and (c) capital gains treatment for income from assets whose costs may have been previously deducted as a current expense. These provisions form the basis for sheltering ordinary income from taxes via both income deferral and conversion to capital gains. Both farmers and nonfarm investors can utilize these rules to reduce their tax burden and, in the process, their actions can have long-term impacts on the structure of agriculture.

Cash accounting ignores inventories. Thus, the farmer can deduct costs of inputs, even though an inventory exists, and can control the tax year in which income is realized through storage of crops and timing of sales. The value of the tax deferral obtained will depend on the tax bracket of the farmer or investor and the degree of financial leverage involved. A farmer or investor tends to get locked in deferral once it is utilized since quitting will often involve receiving two year's income in one tax year.

Most expenses involved in the development of an orchard (except citrus and almonds) or a herd of livestock are deductible as a current expense from other income even though they add to the capital value of the asset. When the livestock or orchard is sold it will have a basis of zero or near-zero and the gains will be treated as capital gains income. This is the mechanism for converting ordinary income to capital gains income. Note, that successful conversion depends on the value of the livestock or orchard increasing in line with the deductible expenditures. The benefits from conversion are a positive function of the tax bracket of the investor with the largest returns accruing to taxpayers (farmers or nonfarm investors) in the highest marginal tax brackets.

The packaging of the tax advantages of investments in breeding livestock and citrus groves for sale to nonfarm investors became popular during the late 1960s. The resulting publicity on the abuses taking place drew legislative attention and these investments were the target of several provisions in the Tax Reform Act of 1969. The citrus provisions of the Act requiring capitalization of planting and development expenses during the first four tax years after planting terminated most of the tax advantages of developing citrus groves. This provision was extended to almonds, effective one year later. Increased holding periods for livestock to qualify for capital gains treatment together with recapture of depreciation also removed most of the incentive for developing herds of breeding or dairy livestock as a tax shelter. The establishment of an Excess Deductions Account to recapture farm losses used to offset nonfarm income when property was sold was designed to preserve farm tax benefits for "farmers". This complex and largely ineffective provision was soon terminated.

Publicity surrounding passage of the Tax Reform Act of 1969 helped to increase the public's awareness and interest in agricultural tax shelters. Investor interest shifted from large individual investments to smaller shares in limited partnership syndicates. Large-scale syndicated offerings for cattle feeding, egg production, and orchard and vineyard development grew rapidly in numbers and dollar value between 1970 and 1973.

Cattle feeding, which offers tax deferral, has probably been the most popular agricultural tax shelter investment for nonfarm investors in terms of number of participants and total investment. At its peak of popularity in 1973, investor owned cattle were probably close to one-fifth of all U.S. cattle on feed, as estimated by Rhodes. He also estimated that investor owned cattle accounted for one-half or more of the cattle in large, fast-growing lots and that funds channeled something in excess of $300 million into feed lots during the 1970-73 period.

The growth of nonfarm investment in cattle feeding was closely associated with the movement of cattle feeding out of the Midwest and with the growth of large-scale feedlots in the High Plains area. Economic factors such as cheap feed, availability of feeder cattle, favorable climate and economies of size also played a role. Matthews and Rhodes concluded that tax induced investment in cattle feeding through limited partnerships was related to structural change. They stated that:

> "The limited partnership has contributed to the formation and growth of larger firms in the cattle feeding industry. Firms utilizing funds have been able to utilize more fully their existing feedlot capacity, to expand existing lots, and to acquire more lots until now the multi-lot cattle feeding firm is becoming common. Capacities of these "super firms" now reach and exceed 100,000 head. Much of this growth activity has occurred simultaneously with the adoption of the limited partnership by these firms. The limited partnership has been seized upon by these entrepreneurs as an opportunity to achieve rapid growth; the results have accentuated the shift in the location of the feed cattle industry from the farmer feedlots of the Midwest to the domain of the super firms with funds in the High Plains and Southwest. As the structure in the cattle feeding industry shifts from one made up of numerous small-to-medium sized feedlots to one made up of fewer firms with much larger feedlot capacities, previously existing market relations begin to break down. Such related industries as slaughter and processing plants, grain suppliers, and trucking services are attracted towards the location of the larger firms [p. 26]."

The shift of investor interest from citrus and almonds to other perennial crops as a result of cost capitalization provisions applicable only to those crops has had significant and long-lasting impacts on several crops. A perennial crop supply response model was used to estimate the impact of development cost capitalization provisions for citrus and almonds on the development of these and other California orchard crops [Carman, 1981]. A copy of the article, reporting the estimated impacts by crop, is attached to this Testimony. Estimated acreage and production of citrus and almonds decreased, as expected. The decreases in orange and lemon acreage, however, were more than offset by increased acreage of walnuts and grapes. The switch of developer and investor interest to walnuts and grapes appears to have added to the cyclical instability of production and prices for these two crops. The adjustments examined involved very significant time lags. The development of new perennial crop acreage often involves the adoption of new production technology such as disease resistent rootstocks, higher yielding varieties, denser plantings, orchards designed for machine harvesting, drip irrigation, or even new crops such as pistachios and kiwi fruit.

As shown in the following table, large public offerings of syndicated tax shelter investments in agriculture reached a peak in 1973 and then decreased as a result of unfavorable economic conditions in the agricultural sector. The Tax Reform Act of 1976 targeted agricultural tax shelter syndicates which used prepaid expenses and nonrecourse loans to realize their objectives. While large scale limited partnerships were effectively curtailed by the 1976 Act, basic agricultural tax incentives remained undisturbed and available to the individual farmer and investor.

Publicly Syndicated Agricultural Tax Shelter Offerings Registered with the National Association of Securities Dealers 1970-1975

Year	Number of Registered Offerings	Dollar Value (1,000)
1970	16	37,506
1971	29	274,863
1972	51	228,080
1973	76	389,006
1974	35	172,228
1975	12	30,310

Some Impacts of Tax Law Changes

Agricultural investments compete with opportunities in other sectors of the economy. Thus, the utilization of farm tax rules in particular agricultural sectors may change substantially over time with no change in tax rules as investors respond to comparative rates of return, interest rates and inflation. Tax rules in other sectors of the economy are also an important determinant of agricultural investment. Tax law changes may have major or minor effects on investment patterns and the impact of the changes may be immediate or may take place over time. Since tax rules typically interact with other factors, it may be difficult to separate the effects of taxes from other factors. Several illustrative examples will be presented.

The citrus provision in the Tax Reform Act of 1969 had an immediate negative impact on tax motivated development of citrus groves, as expected. There was also an unexpected decrease in the price of California citrus groves associated with the Act which can be attributed to the negative publicity concerning the economic prospects for citrus which occurred at the time the Act was passed and implemented (Hardesty and Carman). The shift of investor interest to other perennial crops and other enterprises was also unexpected.

The impact of the selective imposition of capitalization requirements on citrus and almonds some 15 years ago continues to have adverse effects on other California perennial crops. There was an immediate shift of investor interest to development of other orchard crops, especially grapes and walnuts. As tax motivated plantings of these crops reached bearing age, the increased supplies reduced product prices. Production of orchard crops is higher and product prices are lower than would exist if capitalization of development costs were required for all perennial crops. It is difficult to think of a California tree or vine crop which, during the last ten years, has not faced low product prices and returns as a result of production which was high relative to market requirements. In addition, existing tax incentives appear to result in increased instability of both production and prices. This is especially evident in the grape industry, which is characterized by overexpansion in response to favorable returns.

The problem of tax motivated investment for perennial crops has recently been exacerbated by the ACRS provisions in the Economic Recovery Tax Act of 1981. The cost recovery period for trees and vines, previously depreciated over a 20 to 30 year life, is now five years. This change substantially increases the present value of income tax deductions for these crops and can have several significant impacts. Increased investor interest in established orchards and groves was immediate. Budgeted examples demonstrated that the tax incentives from ACRS combined with the investment tax credit for a bearing orchard were greater than from orchard development. In addition, the new incentive applies to citrus and almonds as well as all other tree and vine crops. One would expect this tax incentive to increase orchard prices in the short-run and to set long-run adjustments in motion. Overall acreage for each crop will probably expand as removals are reduced and there may be small increases in acreage developed with an increase in the value of trees.

As noted previously, progressive income tax rates should decrease the after-tax returns for larger farms since increased income is taxed at higher rates. One should note, however, that there is little empirical evidence that progressive tax rates have slowed the growth of farm firms. Instead, it appears that large farms have been able to utilize tax provisions so that their average tax rate may differ little from smaller farms. Decreases in tax rates will increase cash flow, an important factor in farm firm growth

(Melichar). Thus, tax rate decreases in the ERTA can be expected to support farm firm growth.

Present special farm tax rules, including cash accounting, investment tax credits and capital gains treatment, are important income and cash flow determinants for livestock enterprises. For example, Bryant _et_ _al_., found that termination of cash accounting and capital gains treatment for breeding animals would significantly increase average annual income taxes for dairy farms. Income tax provisions combined with dairy price supports have facilitated the growth of large-scale confinement dairy operations in California and have probably been a factor in the growth of dairies in other regions. With current efforts to reduce milk production, one must question the continued need for investment tax credits for milk cows. On the other hand, capital gains tax treatment should have facilitated sales of milk cows but apparently had only limited impact.

Pork producers have been adopting large-scale confinement production technology, especially since the industry lobbied successfully to have the investment tax credit extended to single purpose structures. Now, with the investment tax credit plus full cost recovery over five years with ACRS, there is concern about the possible supply response from new investment in confinement facilities. These tax law changes will likely speed adoption of the capital intensive confinement production system and contribute to structural change in the pork production sector.

Capital gains treatment can also affect operating methods for livestock enterprises. There is incentive to increase sale of animals eligible for capital gains treatment. Thus, the productive life of breeding and dairy animals can be shortened by this tax provision. Some producers, for example, have been able to increase returns by utilizing an all-gilt swine breeding operation (Duffy and Bitney).

Current tax laws favor the substitution of capital for labor and undoubtedly speed the adoption of mechanical systems. Two tax factors are at work, payroll taxes which increase labor costs and the investment tax credit and accelerated depreciation (ACRS) which decreases machinery costs. Tax rules can encourage the adoption of new large-scale farm machinery (four-wheel drive tractors, larger harvesters, and minimum tillage systems) and these investments can be a very important source of technical economies of size. With machine capacity increasing through time, it is likely that the optimum or least-cost size of farm firm has also increased.

ACRS substantially decreases the tax life for some assets such as trees and vines, tile and single purpose structures and has only a small impact on others such as machinery, equipment and livestock. Thus, ERTA can have differential impacts on the after-tax returns and cash flows for various types of farms and different regions because [illegible]ent mixes of depreciable assets. There are also differential impacts by industry. Gravelle's analysis of the affects of ACRS on effective tax rates by industry indicates that eight of the other ten industries considered fared better than did agriculture in terms of relative decreases in effective tax rates.

The Economic Recovery Tax Act of 1981 contained a number of important changes in estate and gift tax provisions. Seven of the major changes with implications to agriculture, the increase in the unified gift and estate tax credit, the 100 percent marital deduction, the larger gift tax exclusion, reduced tax rates, the changes in joint tenancy rules, the liberalized rules on special use valuation, and installment payment of taxes are discussed in an article by Boehlje and Carman (pp. 1033-35). A copy of the article is appended to this Testimony. Overall, we expect these changes to have significant long-term impacts of the structure of agriculture with decreased availability of land for entering farmers, increased pressure on farmland prices, and increased separation of ownership and operation of farmland.

Concluding Comments

The complex of existing tax laws and provisions have a number of impacts on agricultural investments. The effects of changing tax laws on production and prices for some products can be quite obvious but relationships to structural variables are difficult to determine because of interactions with other factors such as inflation, interest rates, weather, technological change, subsidy programs and the economic outlook for a particular sector. For example, taxes can be a very important factor in the growth of farm firms but it is difficult to relate such tax induced growth to the resulting number and size distribution of farms. Most analysts agree that tax laws are an important determinant of farmland prices but again it is difficult to separate the relative importance of taxes versus other variables.

Because of the growing importance of tax rules, there is a need to coordinate proposed tax law changes with our national farm policy. Most of the special farm tax rules as well as the provisions of the Economic Recovery Tax Act tend to encourage increased agricultural production. While this effect is consistent with low food prices, it may run counter to agricultural policy goals related to farm structure and rates of return to agricultural enterprises. Recent tax law changes provide the most benefits to farmers who operate profitable farms and pay taxes. Farm policy may be more concerned with those farms incurring losses and facing problems of survival. There is also a question of tax subsidies to support urban farming as a lifestyle.

Preliminary results of the 1982 Census of Agriculture, for example, indicate that the number of California farms increased 9,274 (from 73,194 to 82,468) between 1978 and 1982 with a resulting decrease in average size of farm from 447 to 390 acres. At the same time there was a 6,700 increase (from 35,134 to 41,834) in the number of farm operators who reported a principal occupation other than farming. More than one-half of California farms are now operated by nonfarmers. Of the farms operated by someone with a principal occupation other than farming, 73.5 percent (30,748) had total sales of less than $10,000.

Special farm tax rules pose a paradox for several agricultural sectors including livestock, poultry and orchard crops. Because of inelastic product demand, the tax incentives which provide a short-term benefit to individual operators may result in a deterioration of long-run returns because of increased total production. Only citrus and almond producers have succeeded in having tax incentives for their crops restricted. Other producers, through their commodity organizations, have opposed attempts to restrict their use of special farm tax provisions even though some of these provisions may expand production. Leaders of some of these organizations question tax incentives in private but continue to support them in public because of a lack of convincing empirical evidence. Additional research focused on the long-run impacts of individual provisions is needed.

Agricultural returns have recently been depressed. Thus, one must hesitate recommending tax law changes which would decrease after-tax farm income. There are, however, two changes applicable to tree and vine crops which I view as being in their best short- and long-term interests. These proposed changes are to: (1) require capitalization of planting and development costs for all perennial crops and (2) lengthen the cost recovery period from the present five years under ACRS to 15 to 20 years. These two changes would help to curtail tax motivated investments in perennial crops and decrease the instability introduced by such investments. They would also remove the differential tax treatment between citrus and almonds and other perennial crops. Note that these two changes would increase product costs to consumers over time and reduce the volume and revenue of middlemen handling the crops (Carman and Youde). I believe, however, that these costs are outweighed by the benefits of decreased subsidies, improved resource allocation and improved stability of production.

There has been little research on the possible impacts of alternative tax structures on the agricultural sector. Detailed calculations of changes in absolute and relative tax burdens require working proposals as well as detailed information and data not generally available to academic researchers. Even with such information, it is difficult to forecast likely structural changes. Despite these difficulties, the importance of taxes to agriculture and the need to coordinate farm policy with tax policy requires a serious research effort. Since access to tax data will be required, perhaps the work could be done as a coordinated effort between the Departments of Treasury and Agriculture. An alternative would be to provide academic researchers access to aggregate tax data as part of a cooperative project.

As a final note, tax rules and provisions have become so complex that most farmers and ranchers are forced to utilize the professional services of lawyers and/or accountants. Simplification should be given a high priority when considering proposals for tax reform.

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References

Boehlje, Michael. "An Analysis of the Implications of Selected Income and Estate Tax Provisions on the Structure of Agriculture." Ames IA: The Center for Agricultural and Rural Development Rep. 105, Oct. 1981.

Boehlje, Michael and Hoy Carman. "Tax Policy: Implications for Producers and the Agricultural Sector." Am. J. Agr. Econ. 64(1982):1030-38.

Boehlje, Michael and Ken Krause. "Economic and Federal Tax Factors Affecting the Choice of a Legal Farm Business Organization." Washington DC: U.S. Department of Agriculture, ERS Agr. Econ. Rep. No. 468, June 1981.

Bryant, William R., Eddy L. LaDue and Robert S. Smith. Tax Reform and Its Effect on the Dairy Farmer. Dept. of Agr. Econ., Cornell Univ., May 1973.

Carman, Hoy F. "Changing Federal Income Tax Rates and Optimum Farm Size." Amer. J. Agr. Econ. 54(1972):490-91.

____ _________. "Income Tax Reform and California Orchard Development." West. J. Agr. Econ. 6(1981):165-80.

Carman, Hoy F. and James G. Youde. "Alternative Tax Treatment of Orchard Development Costs: Impacts on Producers, Middlemen, and Consumers." Amer. J. Agr. Econ. 55(1973):184-91.

Dean, Gerald W. and Harold O. Carter. "Some Effects of Income Taxes on Large-Scale Agriculture." J. of Farm Econ. 44(1962):754-68.

Duffy, Michael and Larry L. Bitney. "The All Gilt Breeding Herd . . . More After-Tax Profits?" Dep. Agr. Econ. Rep. No. 77, University of Nebraska, May 1977.

Gravelle, Jane E. "Effects of the 1981 Depreciation Revisions on the Taxation of Income from Business Capital." Nat. Tax J. 35(1982):1-20.

Hardesty, Sermin D. and Hoy F. Carman. "An Analysis of the Impact of Capitalization Requirements on the Market Value of Citrus Groves." *Journal of the American Society of Farm Managers and Rural Appraisers*. 46(1982):55-60.

Matthews, Stephen F. and V. James Rhodes. In *The Use of Public Limited Partnership Financing in Agriculture for Income Tax Shelter*. North Central Regional Project No. 117, Monograph No. 1, July 1975, pp. 1-3.

Melichar, Emanuel. "Capital Gains Versus Current Income in the Farming Sector." *Am. J. Agr. Econ.* 61(1979):1085-92.

Rhodes, V. James. "Consequences of Income Tax Law and Regulation: Cattle Feeding." In *Income Tax Rules and Agriculture*, University of Missouri, Columbia, Agricultural Experiment Station, Special Report No. 172, December 1974, pp. 28-31.

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Managing Factors of Farm Production
(John R. Brake, Cornell University, Presiding)

Tax Policy: Implications for Producers and the Agricultural Sector

Michael Boehlje and Hoy Carman

Taxes and tax management appear to play a significant role in the choice among various production, marketing, and financial strategies by farmers. Researchers often discover that they can better explain or predict agricultural producers' actions using after-tax rather than before-tax net income. Furthermore, policy makers clearly perceive that changes in tax rules will significantly alter savings and investment behavior as evidenced by the major changes in the U.S. tax code with passage of the Economic Recovery Tax Act of 1981. The purpose of this discussion is to evaluate the impact of tax policy on farm firm decision making, aggregate investment behavior, and supply and prices of agricultural commodities. The discussion will review empirical and numerical studies of changes in tax laws to determine the expected impact of tax policy and the Economic Recovery Tax Act of 1981 in particular on farmers and the agricultural sector.

The Institutional Setting

The federal income and estate tax law is enormously complex, with a myriad of deductions, exemptions, and credits. Furthermore, the law is frequently revised (witness the 1976 Tax Reform Act and 1981 Economic Recovery Tax Act) and new IRS regulations, revenue rulings, and court decisions continually update its application. Our focus in this section is not on the details of the specific provisions of the law but instead on the conceptual base for taxation of income and wealth and the unique treatment of farm income and wealth by the U.S. tax code.

The Federal Income Tax

The individual federal income tax is designed to impose a progressive tax each year on the individual's net income. But if gross income and its related expenses can be reported in different tax years, the level of net income in each year can be distorted. Mismatching income and expenses in different tax years provides deferral of taxes, and it can distort the application of progressive tax rates. Thus, many complex rules have been developed and accrual accounting is required to properly match costs and receipts.

Long-term capital gains from the sale of capital assets are taxed at 40% of the rate applying to ordinary income. This preferential tax rate and the rules for allocating the costs of capital items over the life of the asset provide incentives for mismatching income and expenses. Such mismatching may permit a taxpayer to convert ordinary income to capital gains and reduce effective tax rates.

Special income tax rules applicable to agriculture permit taxpayers to mismatch income and costs thereby reducing tax liabilities. Such provisions include (*a*) the use of cash accounting, (*b*) the immediate deductibility of some expenses of a capital nature, and (*c*) capital gains treatment for income from assets whose costs may have been deducted as a current expense. Cash accounting ignores inventories; thus, the farmer can deduct costs of inputs, even though an inventory exists, and control the tax year in which income is realized through storage of crops and timing of sales

Expenditures incurred in the development of certain farm assets, such as trees (other than citrus or almond trees), vines, and livestock herds used for draft, breeding, dairy, and sporting purposes are capital expenditures. However, farmers may deduct the full amount of such expenditures in the year in

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which they are incurred. These expenditures can be used to reduce ordinary income from other sources which would be taxed at regular rates. Then income from the sale of the assets is usually treated as long-term capital gains with over 40% of the income subject to tax. This is the mechanism for converting ordinary income to capital gains income.

The Estate Tax

The estate tax, also imposed with a progressively graduated tax structure, is a tax on wealth transferred because of death. Generally speaking, the tax is computed on the value of the property owned by the deceased, and the tax is due within nine months after death. Farmers have some relief from both of these rules.

If farmland is a sufficiently large portion of a farmer's estate, the estate tax may be calculated by giving the farmland a special "use" value rather than its full market value. This special-use value is computed under a formula that is estimated to reduce values for estate tax purposes by 50% or more. In addition, farm and other business estates are entitled to an extended time over which to pay the estate tax. Payments need not start until nearly six years after death, and the tax can be paid in ten equal annual installments. During this time, interest on estate taxes due on the first $1 million of estate value accrues at 4%, a rate well below market interest rates or interest charged on other tax liabilities.

Farm Investments as Tax Shelters

Investments taxed under preferential rules, such as the special income and estate tax rules for farmers, allow the creation of tax shelters. This tax shelter characteristic has a significant impact not only on the total financial return from farm assets but may also impact the pattern of ownership of such assets.

Because of the tax shelter potential, high income individuals with farm investments have significant incentive to report deductions as early as possible, delay reporting income as long as possible, and convert ordinary income to capital gains. The returns from actions taken to mismatch income and costs are a direct function of the tax bracket of the investor. A high-bracket taxpayer and a low-bracket taxpayer may earn the same commercial return from a tax sheltered farm investment, but the after-tax returns will be greater for the high-bracket taxpayer. Because ownership of assets slowly gravitates to those who obtain a greater return and thus can pay the most for them, over the long run, ownership of tax shelter assets will be concentrated in the hands of the high-bracket taxpayers. The tax shelter means the most to those with the highest taxable income, whether that income is produced on the farm or elsewhere.

Recognizing the distortions attributable to tax sheltering, tax reform efforts during the 1970s were dedicated primarily to closing "loopholes" and ending preferences enjoyed by particular groups. Tax-motivated investments in citrus and almonds were effectively terminated by capitalization provisions. At the same time, the tax advantages of breeding livestock were reduced by increased holding periods to qualify for capital gains treatment and recapture of excess depreciation. However, investor interest simply shifted to other agricultural enterprises. There were large increases in grape and walnut acreage, and cattle-feeding syndicates flourished (Carman 1981). The syndication of agricultural tax advantages for sale to nonfarm investors was curtailed by the Tax Reform Act of 1976, but individual high income investors continued to realize the tax advantages of agricultural investments.

The Economic Recovery Tax Act

Recent legislation based on the supply side approach to macroeconomic policy is dedicated to reducing tax rates to spur economic activity. The Economic Recovery Tax Act of 1981 (ERTA) does not have specific agricultural provisions, but the general provisions will have significant impacts on agriculture as well as other sectors. Producers' and investors' responses to previous changes in income tax provisions offer a guide to the expected impacts of ERTA.

Income Tax Provisions

Durst, Rome, and Hrubovcak summarized some twenty-six provisions in ERTA which are significant to the agricultural sector. Of these, there are five which can be expected to have important short- and long-run production, price, and/or structural impacts. The five include revised investment tax credit rules, reduced individual tax rates, reduced small corporation tax rates, reduced capital gains tax rates, and an accelerated cost recovery system to replace depreciation provisions. The revised provisions will increase the after-tax return from many agricultural investments and will, thus, encourage some expansion of output.

The investment tax credit. ERTA includes three major changes in the investment tax credit. It (*a*) shortens the useful life needed to qualify for both full and partial credit, (*b*) increases the maximum credits for any tax year for both new and used property, and (*c*) liberalizes recapture of credit for premature disposal of the asset.

We do not expect the revised investment tax credit rules, taken alone, to have a dramatic impact on agricultural investments. The new rules do increase the incentive for investments in short-lived (three or four year) assets. More liberal recapture provisions, allowing a 2% credit for each year the asset was held, favor early disposal of property. The $100,000 limit on the investment tax credit for used property will be increased to $125,000 in 1981 and to $150,000 in 1985. This change together with an increase in the maximum credit for any one tax year and an extension of the carryover period for excess credit from seven to fifteen years will tend to favor large investments. Thus, the major beneficiaries of these revised rules will be the largest farm and nonfarm investors.

Income tax rate reductions. ERTA include across-the-board personal income tax rate reductions and also reduces small corporation tax rates. Personal tax rates are scheduled to be reduced in three steps, 5% on 1 October 1981, 10% on 1 July 1982, and another 10% on 1 July 1983. The highest marginal tax rate is reduced from 70% to 50% for 1982 and later years. Marginal tax rates for the two lowest corporate tax brackets will decrease in two steps. The tax rate for corporations with less than $25,000 taxable income will be reduced from 17% to 16% in 1982 and to 15% in 1983, and the rate for corporations with $25,000 to $50,000 net income will be reduced from 20% to 19% in 1982 and further to 18% in 1983. There is no change in rates for the remaining three corporate tax brackets.

Tax rate reductions in ERTA benefit all taxpayers, but the highest bracket taxpayers receive both the largest percentage and absolute tax savings. It is difficult to predict the response of farmers to tax rate reductions and increases in after-tax income. There likely will be some pressure to expand the average scale of operation. Budgeted examples illustrate that optimum farm size will increase with a reduction in marginal income tax rates (Carman 1972). The impact of lower marginal tax rates on individual farm output is uncertain. A common hypothesis is that decreasing tax rates give producers an incentive to increase output. A case study of five large California farms found, however, that rate reductions occurring between 1962 and 1972 (a reduction of over 20% for the highest marginal tax brackets) provided little incentive to increase output (Lin et al., p. 191).

The Revenue Act of 1978 established a new tax rate schedule for small corporations effective in 1979. Boehlje and Krause analyzed the effect of these changes on the incentives for farmers to incorporate. Their results, for tax rates effective prior to ERTA, indicate that incorporation can facilitate estate planning and transfer and reduce total taxes for farms with net income above $25,000 to $30,000. The differential reductions in marginal tax rates between individuals and corporations will increase this break-even point by almost $5,000 after all scheduled rate reductions are effective in 1983. Incorporation, however, continues to be very attractive to large, growth-oriented farms, and farm corporation numbers can be expected to increase.

Capital gains. Maximum capital gains tax rates are reduced from 28% to 20% by ERTA. The differential between ordinary income and capital gains tax rates will continue to encourage investments and operating methods which permit realization of long-term capital gains. Increased after-tax profits from breeding livestock will favor increased investment in these enterprises. Operating methods are also affected. After-tax returns from an all-gilt swine-breeding operation, as analyzed by Duffy and Bitney, will continue to favor this production method for some producers. As shown by Musser, Martin, and Saunders, crop farms also may move toward livestock production because of the capital gains incentive. After-tax returns from land and orchard development will also be enhanced by the reduction in capital gains tax rates, and these activities may be encouraged. Tax rate reductions will also tend to increase bid prices for appreciating agricultural land, as demonstrated by Boehlje (1981, p. 134).

Accelerated cost recovery system (ACRS). Traditional depreciation of assets has been replaced by ACRS for assets placed in service after 1980. ACRS permits more rapid capital cost recovery and involves supposed simplification of depreciation rules. ACRS provides a five-class system with most agricultural assets fitting into three of the classes, three-year, five-year, and fifteen-year. The taxpayer determines the appropriate class for depreciable property and then applies a statutory percentage to the unadjusted basis of the property. Salvage value no longer enters the calculation.

The majority of depreciable agricultural assets have a recovery period of five years. Recovery rates for property placed in service between 1981 and 1984 are 15% for the first year, 22% for the second year and 21% for each of the remaining three years. Note that the first-year percentage is applicable regardless of when during the year the asset is placed in service. Thus, year-end purchases of assets as part of a tax-planning strategy can be advantageous. The taxpayer has an option of using straight-line depreciation over a longer life if rapid recovery of capital is not desired. With five-year property one can elect to use straight line depreciation over a life of five, twelve, or twenty-five years.

ACRS substantially increases the present value of income tax deductions when compared to traditional straight-line or accelerated methods of depreciation. This increase is due to (*a*) a significantly shorter tax life for most assets under ACRS, and (*b*) recovery of the total value of the asset under ACRS, whereas salvage value was required under previous law. Comparison of previous midpoint tax lives under the Asset Depreciation Range System with recovery periods under ACRS shows the following reductions: cattle, seven to five years; horses, ten to five years; farm machinery and equipment, ten to five years; and farm buildings, twenty-five to fifteen years. There were some other dramatic reductions: the costs of trees and vines and drain tile formerly recovered over twenty to forty years, are now recovered in five years, while the costs of single-purpose structures, formerly recovered over twenty-five years, are also recovered in five years.

These changes will encourage investment in the affected assets, particularly when combined with the investment tax credit. This investment may also affect asset prices and, ultimately, farm product prices as output responds.

Estate Tax Provisions

Changes in the estate and gift tax provisions implemented by ERTA are almost as numerous and complex as the changes in income tax provisions. Our discussion will focus on seven of the major changes: the increase in the unified gift and estate tax credit, and 100% marital deduction, the larger gift tax exclusion, the reduced tax rates, the changes in joint tenancy rules, and the liberalized rules on special use valuation and installment payment of taxes.

The unified credit. In 1976, the lifetime exemption of $60,000, in effect since 1954, was replaced with a unified direct credit against both estate and gift taxes; once the tentative tax is calculated, the credit is used to offset all or part of this tax. The unified gift and estate tax credit was $47,000 for deaths in 1981; this credit would offset the tax on an estate of $175,625. The credit will be increased according to the following schedule:

Year	Unified credit	Deduction equivalent
1982	$ 62,800	$225,000
1983	79,300	275,000
1984	96,300	325,000
1985	121,800	400,000
1986	155,800	500,000
1987	192,800	600,000

In a 1981 study, Boehlje concluded that the benefits of an increased credit, measured by a percentage increase of the estate transferred to the heirs, are larger for modest size estates ($500,000 to $1,000,000) than for larger estates. However, for small estates that would incur no tax under the current law, an increase in the credit would result in no benefits.

Marital deduction. The gift and estate tax law has allowed a partial deduction for property transferred to a surviving spouse during life or at death. With ERTA this deduction was increased to 100%; thus, all qualified transfers to a spouse during life or at death are exempt from taxation. In addition, the executor is given the flexibility to elect whether certain property in which the surviving spouse is given a lifetime interest (a life estate) is to qualify for the marital deduction. This provision gives the executor substantial flexibility in post-death tax planning.

Boehlje also evaluated the potential impact of an unlimited marital deduction. His results (assuming 1981 tax rates) indicate that the unlimited marital deduction may result in higher total taxes because of the concentration of the property in the surviving spouse's estate, and consequently less property transferred to the heirs after both parents are deceased. Furthermore, the availability of the unlimited marital deduction may encourage the transfer of the entire farm to the surviving spouse rather than part of it being devised to the children at the death of the first parent to die; this may result in serious business continuity problems if the children are planning to take over the farm business after the parents' death.

Gift tax exclusion. Annual gifts that do not exceed a specified amount have been exempt from income, estate, or gift taxation. The annual gift tax exclusion was increased by ERTA from $3,000 per recipient per year ($6,000 if a spouse consents in the gift) to $10,000 per recipient per year ($20,000 if a spouse consents).

The expected result of this change is to increase the incentive to transfer property by gift. For example, parents with married children could transfer $400,000 to each child and spouse tax free over a ten-year period of time. In the case of a farm operation where the children anticipate operating the farm after the parents' death, the increased gift tax exclusion should facilitate such business continuity. The larger exclusion should also result in more wealth being transferred between generations free of tax.

Tax rates. The estate and gift tax rates prior to ERTA ranged from 18% on the first $10,000 of transfers to 70% on transfers in excess of $5,000,000. The new provisions reduce the highest gift and estate tax rates from 70% for transfers in 1981 to 65% for transfers in 1982, 60% for transfers in 1983, 55% for transfers in 1984 and 50% for transfers in 1985. When rate reductions are completely phased in by 1985, the maximum 50% rate will be applicable to transfers in excess of $2.5 million.

This reduction in rates will benefit exclusively those with estates in excess of $2.5 million; the result will be that farmers and others with larger estates will find the estate tax less burdensome than in the past, and consequently will be able to transfer more property to their heirs. Furthermore, once the unified credit is fully phased in by 1987, it will offset the tax due on taxable estates of $600,000 or less. The marginal tax bracket for the $600,000 estate is 37%; consequently, in 1987 the effective estate and gift tax rates will range from 37% for $600,000 to 50% for $2.5 million or more of property transferred. This truncated effective rate structure is much less progressive than the rate structure that existed in the past.

Joint tenancy. Prior to 1982, joint tenancy ownership of property between husband and wife incurred the risk of double taxation, particularly for farm families where the husband died first. At the husband's death joint tenancy property was presumed to be owned by him unless the surviving spouse could prove contribution, and the property was transferred by the right of survivorship to the surviving spouse where it was taxed a second time at her (or his) subsequent death.

With passage of the ERTA, one-half of the value of jointly owned property will be presumed to be owned by each spouse for federal estate tax purposes. For joint tenancies other than those between husband and wife, the traditional rules whereby the entire value of joint tenancy property is taxed in the estate of the first joint tenant to die, unless the surviving joint tenant can prove contribution to the property, still apply.

This provision will reduce the potential tax burden at the death of the first spouse for those who own property in joint tenancy. However, joint tenancy ownership may still result in burdensome tax liabilities, not at the first death, but at the second death. Since joint tenancy carries with it the right of survivorship, all joint tenancy property is automatically transferred to the survivor. Consequently, joint tenancies result in the same potential tax problem as noted earlier with the unlimited marital deduction; the tax burden may be minimal at the death of the first spouse, but all the property (that originally owned by both spouses) is "stacked" in the estate of the surviving spouse and at his or her death, this larger estate will be subject to tax at higher rates and without the benefit of the marital deduction

Special use valuation. Special use valuation, which allows farmers to value real estate for estate tax purposes based on its value in use rather than fair market value, was implemented with passage of the Tax Reform Act of 1976. This provision has the potential to reduce estate taxes dramatically for those who qualify to use it. A number of technical changes were made in the special use valuation provisions by ERTA. In general, these changes will make it easier for farmers and their heirs to qualify for and avoid recapture of the substantial tax benefits from this provision. Furthermore, the maximum reduction in estate value allowed using this provision is increased from $500,000 to $600,000 for deaths in 1981, $700,000 in 1982, and $750,000 in 1983.

These changes will increase the tax savings available from the special use provisions and make it available to a broader spectrum of landowners, not necessarily farmers in all cases. In an analysis of the pre-1982 use valuation provisions, Boehlje found that the tax savings increase in absolute magnitude but decline relative to estate size as estate size increases. Furthermore, he argued that:

> The tax savings (percent reduction in taxes) are larger for those farms where land comprises a larger proportion of the estate. In addition, higher valued land appears to receive a larger discount from using special use valuation, resulting in more tax savings, compared to lower valued land. . . . The relative and absolute tax savings from special use valuation are substantially larger when the farm includes more assets and more debt but the same net worth (assuming qualification for this provision). (Boehlje 1982, p. 112)

The 1981 revisions will magnify the effects of this provision.

Installment payment of tax. The installment payment of tax provision that was included in the tax code in 1976 was also revised with passage of ERTA. The requirement that a closely held business must comprise 65% of the adjusted gross estate to qualify for the fifteen year installment payment of tax provision has been reduced to 35%. The installment payment acceleration rules have also been changed. Whereas the law prior to 1981 required acceleration of installment payments if one-third or more of the closely held business property was sold or disposed of, the new rules require acceleration if one-half or more is sold or disposed of. The ten-year installment payment option has been repealed.

In his study of the 1976 law, Boehlje argued that:

> . . . the option to pay taxes in installments allows the heirs to use the earnings from the farm and other sources of income during the 15-year period following death to pay the taxes. . . .
>
> The tax savings from installment payment of tax remain approximately proportional with increases in farm size until the estate reaches the size where the interest rate increases from 4% to the regular rate on unpaid tax ($1 million of taxable property); beyond this the relative size of the tax savings decline. . . . Since it will reduce the need for liquid funds to pay taxes, the installment payment of tax provision may have a greater effect on the continuity of the firm and help to maintain the size of the farm after the parent's death than special use valuation. (Boehlje 1982, pp. 112–113)

The 1981 revisions will make this provision available to a broader spectrum of farmers, and will reduce the possibility of acceleration of payments if part of the farm is sold.

In a recent study comparing provisions of the pre-1981 and post-1981 estate tax, Johnson concluded that:

> The increase in the unified credit decreases the federal liabilities for all estate sizes. Correspondingly, the liquidity losses associated with the estate transfers also decline under the new law. These benefits translate into an increase in the percent of the parents' property which is ultimately received by the heirs. . . . When farm estates qualify for special use valuation, the larger estates receive a greater absolute benefit from the new law than smaller estates. Furthermore, the results in this analysis suggest that the 1981 tax law magnifies the effect of use valuation as quantified by Boehlje (1981) by further counteracting the progressive nature of the tax rate schedule. (Johnson pp. 114, 117)

Aggregate Impacts of Tax Policy

The aggregate impacts on agriculture of changes in tax provisions are difficult to ascertain. Agricultural producers respond to many factors in their investment and production decisions and their responses often involve significant time lags. The short- and long-run implications of tax law changes may differ as may the individual and aggregate impacts. Davenport, Boehlje, and Martin, in their study of the effects of tax policy on American agriculture prior to 1981, concluded: "Generally, tax policy has led to upward pressure on farmland prices, larger farm sizes, incentives for farm incorporation, altered management practices, and increased use of farmland as a tax shelter by both farmers and nonfarmers"

(p. i). While substantial future research will be required to document the impacts of the Economic Recovery Tax Act of 1981, past work provides a basis for forecasting the nature of some aggregate effects.

Agricultural versus Other Industries

The new Accelerated Cost Recovery System (ACRS) and revised investment tax credits can be expected to have a differential effect on assets because of different relative changes in tax lives. There also will be a differential impact on industries because of different mixes of capital stock. Gravelle has completed a study of the effects of ACRS on effective tax rates by asset type and industry under two annual inflation rates. Her analysis, which considered only equipment and structures, estimates that effective tax rates on a marginal increment of investment in agriculture will decrease from 29.5% to 16.7% assuming 6% inflation or from 34.5% to 22.5% assuming 9% inflation (p. 14). Her ranking of eleven broad industries from highest to lowest in terms of effective tax rates places agriculture 5th prior to and 4th after passage of ERTA. Eight of the other ten industries fared better than agriculture when considering relative decreases in effective tax rates. Gravelle did not consider inventories and land, factors which if included would have increased agriculture's relative effective tax rate (p. 15). She also omitted breeding livestock and perennial crops, assets which if included would decrease agriculture's effective tax rate. Despite these omissions and her failure to consider some special tax rules, her results indicate that ERTA does tend to favor capital investment in industries other than agriculture.

Differential Impacts within Agriculture

The Accelerated Cost Recovery System substantially increases the present value of income tax deductions when compared to existing methods of depreciation; the increase is primarily a function of the decrease in tax life of various assets due to ACRS. Examples noted earlier include the dramatic changes for trees and vines, tile, and single-purpose structures. Thus, the ACRS provisions in ERTA can be expected initially to have a differential impact on after-tax returns from farm enterprises because of variations in the mix of depreciable assets. Because farm types and enterprise mixes vary by state and area within the United States, ERTA can have significant regional impacts on effective tax rates and after-tax rates of return and capital investment. Research will be necessary to determine the nature and extent of regional differentials.

Individual versus Aggregate Impacts

Farm income tax provisions can yield short-term tax savings to the individual producer which are more than offset by long-term product price decreases due to supply response. The supply response induced by tax incentives may require several years to be completed. Tax law changes terminating the tax advantages for citrus and almond orchard development resulted in decreased plantings, acreage, and production for these crops with accompanied increases in product prices (Carman 1981). In the study simulation, changes in acreage and production continued for over fifteen years after the tax law changes occurred. These long-term adjustments can affect many groups in addition to producers. A budgeted example for selected orchard crops demonstrated that middlemen and consumers could realize significant benefits from tax provisions encouraging orchard development (Carman and Youde).

The dramatic decrease in tax lives for trees and vines included in ERTA will have significant impacts through time. In the short run, investor interest will shift from developing orchards to purchasing bearing orchards. Budgeted examples indicate that capital recovery over five years from bearing orchards provides more after-tax income than orchard development, even when development costs are deducted from other income as a current expense. The price of bearing orchards is expected to increase, with the maximum increase dependent on the marginal income tax bracket of the investor.

As after-tax returns increase, a long-run supply response is also set in motion. An estimated supply response model for California navel oranges traces possible impacts of ACRS through time. The model assumes that investors are in the 50% marginal income tax bracket, and an 8% discount rate is used (Hardesty and Carman). The estimated price of an acre of developed navel orange trees (omitting land values) initially increases a maximum of approximately 44%. This results in an increase in plantings, a decrease in removals, increased production and decreased navel orange prices. A projection to 1995 estimates that ACRS increases total acres 27%, bearing acreage 21%, and decreases prices 7%. However, even with ACRS, projected 1995 acreage and production are below actual 1980 levels.

Tax Shelter Investments

Some analysts believe that the decrease in tax rates under ERTA will reduce the demand for tax shelter investments. We do not expect a significant decrease in agricultural investments. The differential tax treatment of ordinary income and capital gains continues to make income conversion attractive. In addition, there will be an increased number of agricultural investments available because purchase of existing orchards, including the old favorites citrus and almonds, offers tax shelters as good or better than orchard development. Breeding livestock will become more popular because of shortened tax lives, no salvage value, and the investment tax credit. Land investments will also continue to be attractive income and estate tax shelters for many individuals.

Structural Impacts

The hypothesized individual and aggregate response to provisions in the Economic Recovery Tax Act of 1981 will tend to perpetuate and possibly accelerate structural changes in agriculture already underway. For example, Boehlje has argued elsewhere with respect to the use valuation provisions in estate tax law:

> The incentives provided by this tax provision for structural change include the encouragement of higher leverage for farmers, potential separation of the ownership and operation of farmland and additional pressures in the rental market (including the development of innovative leases to maintain qualifications for this provision for landlords), and entry problems because of the premium that can be paid by older farmers for property with similar productivity. The reduced offerings of land because some farmers will choose to own land until death to obtain the tax benefits, combined with the increased demand to buy real property to obtain the estate tax benefits will most likely result in increased real estate prices. And since the tax benefits only accrue at death, additional divergence between the value of land and its income-generating capacity would result in further cash flow problems for those buying land, particularly the beginning farmer. (Boehlje 1982, p. 115)

We expect continued pressure on farmland prices, larger farm sizes, adoption of management practices to reduce taxes, incorporation for its tax advantages, and continued exploitation of farm tax rules by both farm and nonfarm investors.

References

Boehlje, Michael. "Analysis of the Implications of Selected Estate Tax Provisions on the Structure of United States Agriculture." *Agr. Law J.* Spring 1982, pp. 99–124.

———. *An Analysis of the Implications of Selected Income and Estate Tax Provisions on the Structure of Agriculture.* Ames IA: The Center for Agricultural and Rural Development Rep. 105, Oct. 1981.

Boehlje, Michael, and Ken Krause. *Economic and Federal Tax Factors Affecting the Choice of a Legal Farm Business Organization.* Washington DC: U.S. Department of Agriculture, ERS Agr. Econ. Rep. No. 468, June 1981.

Carman, Hoy F. "Changing Federal Income Tax Rates and Optimum Farm Size." *Amer. J. Agr. Econ.* 54(1972):490–91.

———. "Income Tax Reform and California Orchard Development." *West. J. Agr. Econ.* 6(1981):165–80.

Carman, Hoy F., and James G. Youde. "Alternative Tax Treatment of Orchard Development Costs: Impacts on Producers, Middlemen, and Consumers." *Amer. J. Agr. Econ.* 55(1973):184–91.

Davenport, Charles, Michael D. Boehlje, and David B. H. Martin. *The Effects of Tax Policy on American Agriculture.* Washington DC: U.S. Department of Agriculture, ERS Agr. Econ. Rep. No. 480, Feb. 1982.

Duffy, Michael, and Larry L. Bitney. "The All Gilt Breeding Herd . . . More After-Tax Profits?" Dep. Agr. Econ. Rep. No. 77, University of Nebraska, May 1977.

Durst, Ron, Wendy Rome, and James Hrubovcak. *The Economic Recovery Tax Act of 1981: Provisions of Significance to Agriculture.* Washington DC: U.S. Department of Agriculture, ERS NED Staff Rep. No. AGES 810908B, Sep. 1981.

Gravelle, Jane E. "Effects of the 1981 Depreciation Revisions on the Taxation of Income from Business Capital." *Nat. Tax J.* 35(1982):1–20.

Hardesty, Sermin D., and Hoy F. Carman. "Orchard Investment and the Economic Recovery Tax Act of 1981." Dep. Agr. Econ. Work. Pap. No. 82-3, University of California, Davis, July 1982.

Johnson, Sandra. "The Impact of the Economic Recovery Tax Act of 1981 on the Intergenerational Transfer of Farm Estates." M.S. thesis, Iowa State University, 1982.

Lin, William, H. F. Carman, C. V. Moore, and G. W.

Dean. "Producer Response to Income Taxes: An Empirical Test within a Risk Framework." *Nat. Tax J.* 27(1974):183–95.

Musser, Wesley N., Neil R. Martin, Jr., and Fred B. Saunders. "Impact of Capital Gains Taxation on Farm Organization: Implications for Meat Animal Production on Diversified Farms." Dep. Agr. Econ., University of Georgia, 1976.

Income Tax Reform and California Orchard Development

Hoy F. Carman

The effects of requiring capitalization of citrus and almond orchard development expenses on acreage, production and product prices for seven California orchard and vine crops are estimated. Acreage and production of citrus and almonds decreased, as expected. The decreases in orange and lemon acreage, however, were more than offset by increased acreage of walnuts and grapes. The switch of developer and investor interest to walnuts and grapes appears to have added to the cyclical instability of production and prices for these two crops. Perennial crop adjustments to selective changes in tax provisions involve very significant time lags.

Income tax provisions are an important factor in capital investment decisions for orchard, grove and vineyard development. Special farm tax provisions, especially cash accounting and the current deduction of orchard development costs, provide significant development incentives. Termination of much of this incentive for development of citrus groves and almond orchards by federal income tax reform in 1969 and 1970 has had short- and longer-run impacts on citrus and almonds as well as other perennial crops.[1]

The expected impacts of capitalization requirements on citrus and almonds are decreased plantings, decreased total acreage and in the longer-run, decreased production and higher product prices than would have existed without capitalization. For other orchard crops there may be increased plantings, increased total acreage, increased production and decreased prices as development responds to changing comparative after-tax development costs.

Objectives

Empirical studies of the impact of agricultural income tax incentives and changes in these incentives have utilized budgeted examples and very specific assumptions concerning cost conditions, crop returns, and the income tax bracket of the developer. Thus, they have limited applicability for aggregate studies and, while one can be confident of the general direction of impacts, there is a great deal of uncertainty on magnitudes. There are now sufficient data available to obtain statistical estimates of the impact of the citrus and almond capitalization requirements on acreage, production and

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[1] The citrus provision requires that all expenditures for purchase, planting, cultivation, maintenance, or development of any citrus grove must be capitalized during the first four tax years after planting. The rule applies to citrus trees planted after December 31, 1969, and was extended to almond trees planted after December 29, 1970. The text of the law is in IRC section 278. A Treasury Regulation [1.278-1 (a)(2)(iii)] issued in 1971 provides that section 278 shall not apply to expenditures attributable to real estate taxes or interest, to soil and water conservation expenditures allowable as a deduction under IRC section 175 or to expenditures for clearing land allowable as a deduction under IRC section 182.

prices for California citrus, almonds and related crops.[2]

The specific objectives of this research are to:

1. Describe the utilization of farm income tax provisions in orchard development and present available evidence on the extent of nonfarm investor activity.
2. Specify a model of perennial crop supply response which includes a variable to measure the impact of tax reform.
3. Use this supply response model to estimate the impact of changing cost capitalization provisions on acreage, production and prices for California navel oranges, valencia oranges, lemons, almonds, walnuts, avocados and grapes.

This article is organized in line with the objectives. The analytical portion of the study is restricted to California crops because California has a variety of tree and vine crops as well as published annual estimates of plantings, bearing acreage, nonbearing acreage, yield and price required for the analysis. The three citrus crops and almonds were directly affected by tax provisions changed in 1970 and 1971. Walnuts, avocados and grapes are included to determine if there was a shift in developer and investor interest to these crops, as hypothesized.

Income Tax Incentives and Orchard Development

The establishment of orchards and vineyards (other than citrus and almonds) offers tax shelter opportunities. The current deduction of pre-production expenses provides deferral while recovery of a high proportion of establishment costs when the property is sold converts ordinary income to capital gains. Since the crops require several years to reach full bearing, the development costs are deductible from other taxable income.

Citrus grove and almond orchard development were popular tax shelter investments during the 1960's. Capitalization provisions effective in 1970 and 1971, however, shifted investor interest to other crops. Since 1971 there have been public offerings emphasizing tax shelter advantages for the development of grapes, avocados, walnuts, dates, figs, olives, pistachio nuts, and kiwi fruit. The public offerings of tax shelter investments in orchard development were effectively terminated, however, by the Tax Reform Act of 1976. The 1976 Act requires farming syndicates to capitalize planting and development costs for all orchards, groves and vineyards.[3] Individual investors, however, can continue to treat orchard development expenses as a current cost to be deducted from other income for all crops except citrus and almonds.

Comparison of the present value of current deduction versus capitalization of preproduction expenses reveals a significant advantage for current deduction whether the orchard is sold when developed or retained throughout its bearing life. Budgeted examples presented by [Carman 1972 and Carman and Kenyon] demonstrate that the tax subsidy varies directly with the income level of the investor and is largest for those investors with the largest income, be it from farming or elsewhere.

The Extent of Tax Motivated Orchard Development

Data related to tax shelter investments in agriculture are very limited. Interstate public offerings to nonfarm investors are registered with the Securities Exchange Commission (SEC). Public offerings sold only intrastate usually must be registered with a state agency. However, neither the SEC nor the comparable state agencies publish data on the offerings, even though they are registered. Moreover, private placements and small private offerings have no registration requirements.

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[2] Obtaining data to measure the impact of agricultural income tax incentives has been and will continue to be difficult. Krause and Shapiro discuss some of the problems associated with researching tax shelter investments and also comment on research needs.

[3] Sisson discusses the provisions affecting agriculture in the Tax Reform Act of 1976. Those aimed specifically at tax shelter investments include limitation on deductions to amount at risk, limits on deductions for farming syndicates, accrual accounting for large farm corporations, and restrictions on prepaid interest.

Scofield found that there were eight limited partnerships to establish orchards and vineyards registered with the SEC in 1970-71. They planned to develop about 22,000 acres with investor capital of approximately $40 million. Jeanne Dangerfield listed a who's who of syndicated farming in 1973 which included offerings for orchard and vineyard development worth almost $53 million on 47,000 acres in California. There was undoubtedly some overlap in the syndicates listed by Scofield and Dangerfield. A large number of smaller syndications sold only within California (or only within other states) and private placements were not included in either report. To place these acreages in perspective, estimated annual plantings of all California tree and vine crops from 1970 to 1972 averaged about 85,000 acres.

Estimated Impacts

The development of perennial crops is based on expected profits over the life of the asset where after-tax profits depend on both economic conditions and tax provisions. Expected economic conditions, with expectations based on recent experience, are probably the most important determinant of new tree plantings. The income tax subsidy provided by current deduction of development expenses can be expected to increase tree plantings, total acreage and ultimately, total production. The amount of tax subsidy available to a developer depends on the developer's tax bracket. Thus, the increase in tree plantings as a result of the subsidy is a function of the elasticity of tree planting and developers' tax brackets.

Carman and Youde estimated the acreage response of five California orchard crops to income tax subsidies. Assuming all developers were in the 50% marginal tax bracket, the percentage increase in acreage by crop was estimated as: apples, 2.38%; apricots, 3.20%; avocados, 6.48%; freestone peaches, 1.75%; and olives, 0.14%. Using an economic surplus framework, Carman and Youde estimated that for the five orchard crops considered, combined net returns to consumers, middlemen, and producers as a result of orchard development tax subsidies ranged from $.12 per dollar of subsidy for olives to $15.00 per dollar of subsidy for apricots. While the distribution of gains varied by commodity, consumer surplus was the largest segment of gross social returns for all crops and income tax brackets considered.

A case study of five large California farms using a utility-maximizing risk framework found that farmers would reduce their acreage of tree crops by 16% in response to requiring capitalization of development costs for all orchard crops [Lin *et al*]. This estimate is probably too high for the total situation, given the comparatively high tax brackets of the large case study farms.

To summarize, the available evidence on the impact of tax subsidies on orchard development is incomplete. The current deduction of development costs reduces after-tax costs of development and should expand planted acreage, *ceteris paribus*. The impact apparently varies by crop and can be affected by the tax status of developers. The impact on total acreage of individual crops may be close to zero or as great as 16%. With increased acreage, increased production, lower product prices and probably lower orchard prices would be expected. But, because of extensive lags between planting and production and interactions between prices, plantings and removals, the impacts may not be apparent for a number of years, if at all.

The studies to date are partial analyses based on budgeted examples. Thus, the impacts of tax subsidies outlined above are best regarded as testable hypotheses based on economic theory. In the following sections, empirical models are specified and estimated as a limited test of the above hypotheses for California navel and valenica oranges, lemons, almonds, walnuts, avocados and grapes.

Perennial Crop Supply Response

Perennial crop development involves extensive lagged adjustments not found in annual crops. Investor and developer expectations are often based on recent production and price relationships. Establishment of the perennial crop then takes several years from planting to commercial production and requires a significant capital investment. Production occurs over an extended period, finally decreasing for "old" plants which are eventually removed. Thus, the production of a perennial crop is a function of lagged planting and removal decisions which combine to determine bearing and nonbearing acreage. Annual production is the product of bearing acreage and yield.

Evaluation of the impact of citrus and almond capitalization requirements on these and related perennial crops requires specification and estimation of a model of supply response for each crop. The theoretical framework for models of producer supply response has been developed by several researchers. Most recent applications and estimated models involve minor modifications and extensions to the basic model presented by French and Matthews.

The French and Matthews theoretical model has five major components. They are: (1) functions for desired production and bearing acreage, (2) a relation between desired and actual planting, (3) an acreage removal equation, (4) relationships between unobservable expectations and observable variables, and (5) a yield equation. Their empirical application of the model was to asparagus.

The French and Matthews model has been modified, extended and further validated for a number of crops. Rae and Carman formulated a revised measure of yield expectations given technical change (semi-dense plantings) and applied the model to the New Zealand apple industry. Baritelle and Price estimated a supply response model for the Washington apple industry. They utilized a polynomial lag formulation to estimate annual net changes in the number of trees. Bushnell developed a supply response component for his optimum control model of the world almond market. Minami, French and King applied a supply response model to analysis of the impact of the California cling peach marketing order. Thor used a similar model to analyze the impact of the California-Arizona orange marketing orders. Each of the above studies assisted in the development and estimation of the supply response model utilized in this study.

The Supply Response Model

A supply response model to estimate the impact through time of capitalization provisions requires components for total acreage bearing acreage, yields and average farm level prices. The structure of the model utilized is illustrated in Figure 1. It is a simple recursive model based on the lagged response of production to prices. Beginning with California production and moving clockwise, the model indicates that current price is determined by current production and demand. Profit expectations are based on a combination of current and past prices (or total revenue per acre) and cost factors. Acreage decisions, involving planting and removals, are a function of profit expectations. Note that existing acreage may be considered in the planting and removal decisions. Acreage decisions may not affect production for several years. Thus, current production is a function of past prices. The cobweb or cyclical behavior of perennial crop production and prices shown in the model was previously demonstrated by French and Bressler.

As shown in Figure 1, annual production is the product of average yield and bearing acreage. Equations are estimated for annual planting and annual change in total acreage. Then, these estimated relationships are used to calculate an estimate of bearing acreage using the following identity:

$$TA_t = BA_t + NBA_t \text{ or } BA_t = TA_t - NBA_t$$

where:

TA is total acreage of the crop in year t.

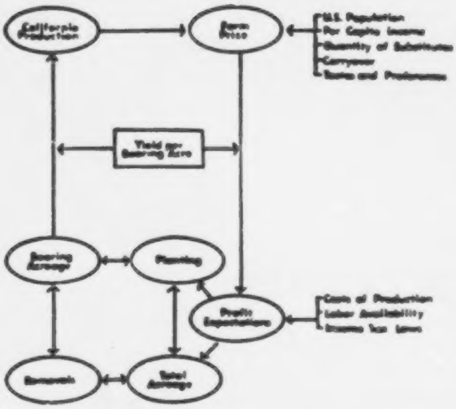

Figure 1. A Simple Recursive Model of California Perennial Crop Acreage, Production and Prices.

BA is bearing acreage in year t.

NBA is nonbearing acreage in year t.

Assuming that all plantings reach bearing age, nonbearing acreage is the sum of plantings during the number of years that elapse between the time a tree is planted and classified as bearing. The time required for a tree to be classified as bearing varies by crop, variety and geographic region. The range of times used by the California Crop and Livestock Reporting Service and the times used in this study for a tree to reach bearing size are shown by crop in Table 1. The basic specification of equations for each model component are described in the following sections.

Planting: New plantings of a perennial crop are specified as a function of expected profitability of both that crop and alternative crops. Since these expectations cannot be observed, estimation requires specification of a set of observable variables related to expected profitability.

It is typically assumed that producer expectations are based on recent experience. Thus, empirical models of planting usually include lagged values for prices or total revenue adjusted for costs of production. Simple averages, geometrically weighted averages, and distributed lag formulations of various lengths have been employed. Estimated planting equations have also included variables for urbanization, risk and uncertainty, farm labor availability, returns from other crops, acreage (total, bearing, or acreage in particular size categories), technological change, and changes in tax laws. The availability of land suitable for orchard crops could also affect expectations. Attempts to develop a suitable variable for new irrigated acreage on the west side of the San Joaquin Valley, however, were unsuccessful because of data limitations.

For the crops included in this study, new plantings are specified as a function of lagged average prices or total revenue divided by the index of prices paid by farmers for production items, a dummy variable for income tax reform, farm labor availability, and total or bearing acreage. We expect the price or total revenue variable to be positively related

TABLE 1. The Number of Years California Fruit and Nut Crops Require to Reach Bearing Age.

Crop	Years From Planting to Bearing	
	Range*	Used in This Study
	----------years----------	
Almonds	4-5	5
Avocados	3-5	3
Grapes	3	3
Lemons	5-6	5
Navel Oranges	5-6	6
Valencia Oranges	5-6	5
Walnuts	5-7	6

*Source: California Crop and Livestock Reporting Service, *California Fruit and Nut Acreage*, annual issues.

to plantings. Note that selection of either lagged price or total revenue and the number of years to be averaged was based on the formulation which provided the best statistical results. We expect the coefficient on the tax reform variable to be negatively related to citrus and almond plantings and to be positively related to plantings of avocados, grapes and walnuts.

Inclusion of a variable for farm labor availability is based on Bushnell's almond study. He reasoned that producers concerned about labor availability would shift to crops which had mechanized harvest. The same argument can be extended to crops such as citrus for which harvest timing is not critical. Citrus can be stored on-the-tree with picking over an extended period. The coefficient on the labor index variable should be negative for crops which have mechanized harvest or which can be easily harvested over an extended period.

The coefficient on the acreage variable should be negative because: (1) increased acreages are associated with potentially larger crops and lower product prices, and (2) orchards are developed on the most suitable land first, and expansion takes place on lower quality land. Each of these two factors are associated with decreases in expected profits.

Changes in Total Acreage: Annual changes in total acreage of a perennial crop can be regarded as net investment whereas plantings are gross investment.[4] Thus, the specification for the annual change in total acreage equation should be similar to the planting equation. In this study, the independent variables included in the two equations are identical. Arguments regarding expected signs on coefficients are also identical for the two equations.

A possible weakness in identical specification of the two equations is that there may be variables associated with removals which are only weakly associated with planting. This problem should be insignificant, however, since the dependent variable in each equation is a function of expected profits and the independent variables are observable variables associated with expected profitability.

Yields: Per acre yields can be influenced by a number of factors including management and cultural practices, weather, varieties, age of trees, application of inputs and technology. For the projections portion of this study, we are interested only in long-term trends in yields. Thus, average yields are specified as a function of time. Both linear and logarithmic forms of the equations were estimated. The linear form provided superior results for all crops except lemons.

Prices: The price equation is a central component of the supply response simulation model. Prices are specified as a function of current production of the crop and competing crops, consumer income, carryover, population and tastes and preferences. We expect prices to be negatively related to production of the crop, production of competing crops and carryover. Each of these variables is expressed in per capita terms. We expect prices to be positively related to per capita income. Changes in tastes and preferences, reflected by a trend variable, may be either negative or positive.

Prices are estimated as a linear function of the variables specified using ordinary least squares methods. Equations were estimated using both current and real prices and in-

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[4] Net changes (net investment) in the capital stock of trees can be separated into planting (gross investment) and removals. Consider the relationship:

$$TA_t = TA_{t-1} + N_t - R_t$$

which states that total acreage (TA) of a perennial crop at the end of year t is the total acreage at the end of year t − 1 plus plantings (N) and minus removals (R) in year t. Moving TA_{t-1} to the left side of the equation, we have:

$$TA_t - TA_{t-1} = N_t - R_t$$

where $TA_t - TA_{t-1}$ is the annual change in total acreage. One would prefer to estimate removals directly and use a removals equation to estimate annual changes in total acreage. This direct approach is hampered, however, by serious data problems. Annual removals are not reported and, while they can be calculated, little confidence can be placed in the calculated series.

comes. Current prices and incomes yielded the best statistical results and are used in the simulation model.

Estimation of the Model

The time span covered by data used in estimation of the model varies by equation. The yield and price equations are estimated for the period 1960-1978. The planting and change in total acreage equations utilize data to yield estimated values for each of the years 1962 through 1978. Thus, for a crop which uses a three-year lagged average of total revenue, data for the period 1958-1978 are required.

Various formulations of prices and per acre total revenue, including simple averages, weighted averages and distributed lags, were investigated. Simple averages provided the best statistical results. The choice of price or total revenue and the number of years averaged were based on statistical measures. A zero-one variable was utilized to estimate the impact of tax reform. Various lags were investigated for the tax variable since producers and developers may have had development commitments not subject to immediate change. Lemons were the only crop in which a one-year lag of the tax reform variable improved results.

Some adjustments to the planting and acreage data series were necessary. An example for derivation of the new planting series and an explanation of necessary adjustments is contained in [Carman 1980, pp. 76-77]. Acreage data, new plantings, average yields, and prices used in estimating the model for each crop and a summary of variables utilized and data sources is also included in Carman 1980, (pp. 78-86).

Estimated Model Components

Equations for planting, change in total acreage, yield and price are estimated for each crop. These equations, the components of each simulation model, are joined together and used to estimate the impact of tax reform provisions on each of the seven crops.

Planting and Acreage Equations

Estimated equations for annual new plantings and annual changes in total acreage for each of the seven crops studied are presented in Table 2. The estimated equations are generally quite good as shown by the statistical measures included. The tabled R^2 values indicate that the variables included in the equations explain from 82 to 98% of the variation in annual plantings and from 66 to 96% of the variation in annual change in total acreage. The Durbin-Watson statistics show no evidence of serial correlation in the residuals. The estimated coefficients generally have the expected signs, most are statistically significant at the 95% level of confidence or greater and most are of reasonable magnitudes.

The coefficients on the lagged average price and lagged average total revenue per acre divided by the index of prices paid by farmers for production items are positive, as expected, and 12 of the 14 are significant at the 99% confidence level. The best statistical results were provided by lagged moving averages of five years for lemons and walnuts, three years for valencia oranges and avocados, and two years for navel oranges and almonds. For grapes, deflated prices lagged one year were utilized.

Comparison of the price or total revenue coefficients for the plantings and change in total acreage equations reveals that the coefficient is larger in the change in total acreage equation for five of the seven crops. This indicates that removals are an inverse function of expected profits for these crops, i.e., higher current prices or total revenue are associated with lower removals. It appears that removals are a positive function of prices or total revenue for the two nut crops. However, there is little difference in the size of the two coefficients for almonds and the change in total acreage coefficient for walnuts is not significant.

Each of the coefficients on the tax reform variable has the expected sign and seven of the 14 are significant at the 95% confidence

TABLE 2. California Orchards Crops: Estimated Annual Plantings and Annual Changes in Total Acreage Relationships.

Crop and Dependent Variable	Variables							Summary Statistics	
	Constant	Lagged Average Price	Lagged Average Total Revenue	Citrus Tax Reform^a	Almond Tax Reform^b	Farm Labor Index t − 1	Lagged Acreage t − 1	R^2	Durbin-Watson
	Coefficients								
Navel Oranges									
Plantings	7067 (2.45)^c		13.91^d (8.74)	−2621 (−4.64)		−110.20 (−3.49)		.97	2.29^h
Δ Total Acres	10486 (2.61)		18.88^d (8.52)	−3068 (−3.90)		−194.48 (−4.42)		.96	2.47^k
Valencia Oranges									
Plantings	−5906 (−1.30)	1822^e (3.69)		−133 (−.25)		105.03 (2.67)	−.08^i (−3.63)	.98	1.85^i
Δ Total Acres	19104 (.95)	2735^e (1.25)		−3174 (−1.36)		−140.32 (−.80)	−.13^i (−1.30)	.66	2.60^j
Lemons									
Plantings	−4609 (−4.99)		6.65^f (7.98)	−1714^h (− 4.37)				.82	2.75^k
Δ Total Acres	−12415 (−5.98)		11.54^f (6.15)	−2869^h (−3.25)				.73	3.08^j
Almonds									
Plantings	77905 (4.02)	52.13^d (7.20)			−1809 (−.65)	−800.09 (−5.80)	−.05^i (−1.79)	.88	2.27^h
Δ Total Acres	71520 (3.23)	45.12^d (5.46)			−934 (−.29)	−707.20 (−4.48)	−.06^i (−1.85)	.81	2.36^i
Walnuts									
Plantings	48033 (5.04)		86.72^f (3.16)	1755 (2.40)		−237.46 (−6.55)	−.32^j (10.24)	.93	2.06^k
Δ Total Acres	98372 (3.85)		25.03^f (.34)	314 (.16)		−513.09 (−5.28)	−.36^j (−4.30)	.75	2.83^j

TABLE 2. Continued

Crop and Dependent Variable	Variables							Summary Statistics	
	Constant	Lagged Average Price	Lagged Average Total Revenue	Citrus Tax Reform[a]	Almond Tax Reform[b]	Farm Labor Index t - 1	Lagged Acreage t - 1	R^2	Durbin-Watson
	Coefficients								
Avocados									
Plantings	−19922 (−3.55)		9.19[e] (4.84)		121.54 (.17)	128.79 (3.13)		.90	1.70[l]
Δ Total Acres	−20642 (−3.00)		10.19[e] (4.38)		58.86 (.07)	118.16 (2.34)		.90	1.81[l]
Grapes									
Plantings	122905 (4.84)	544.01[g] (3.54)			32454 (3.87)		−.29[j] (−6.14)	.85	1.77[k]
Δ Total Acres	74252 (2.45)	696.41[g] (3.79)			22699 (2.27)		−.23[i] (−4.08)	.79	2.33[l]

[a] Citrus tax reform is a dummy variable, 1962-1970 = 0 and 1971-1978 = 1.

[b] Almond tax reform is a dummy variable, 1962-1971 = 0 and 1972-1978 = 1.

[c] Figures in parentheses are t-statistics.

[d] Two year moving average lagged one year.

[e] Three year moving average lagged one year.

[f] Five year moving average lagged one year.

[g] Grape prices are lagged one year.

[h] The effect of citrus tax reform was lagged one year, thus 1962-1971 = 0 and 1972-1978 = 1.

[i] Total acreage (bearing plus nonbearing) is lagged one year.

[j] Bearing acreage is lagged one year.

[k] Accept, indicates that the hypothesis of no serial correlation cannot be rejected at the 1 percent level of significance.

[l] The test for serial correlation is inconclusive at the 1 percent level of significance.

level. These tax coefficients indicate that new plantings and total acreage of citrus and almonds decreased with capitalization requirements while new plantings and total acreage of walnuts, avocados and grapes increased. The variable for tax reform is retained in each of the equations, even when not significant, and the estimated coefficients are utilized in the simulation model to compare results with and without tax reform.[5]

The availability of farm labor as measured by the index of farm labor input in the Pacific Region is related to plantings and changes in total acreage for five of the crops. New plantings and total acreage of navel oranges, almonds and walnuts increased as farm labor decreased. Navel oranges are stored on-tree and harvested over an extended period while almonds and walnuts are mechanically harvested. Thus, availability of harvest labor is not as critical for these crops as it is for many others. Plantings of valencia oranges and avocados as well as total acreage of avocados decreased as the farm labor index decreased.

Plantings and annual changes in total acreage are negatively related to total acreage of valencia oranges, almonds and grapes and bearing acreage of walnuts. This negative relationship is expected and five of the coefficients are significant at the 99% confidence level. The remaining three coefficients are significant at lower confidence levels.

Yields

Actual yields for each crop are utilized in the model for the period 1970 to 1978 but an estimate is required for the projections to 1985. Average yields for the period 1960 to 1978 are used unless there was a significant trend in yields. Simple trend equations for yield were estimated and the results are presented in Table 3. As shown, only three of the crops, lemons, walnuts and avocados, have a significant trend in yields.[6] The trend coefficient was incorporated in the yield projection for these crops. For the other crops (navel oranges, valencia oranges, almonds and grapes), the average yield in Table 3 was used in the projection.

Product Prices

Estimated farm level price equations for each of the seven crops are presented in Table 4. Again the results are quite satisfactory. The variables included in the equations explain from 88 to 99% of the annual variation in farm prices for the seven crops. each coefficient has the expected sign and most are significant at the 95% or greater confidence level.

The coefficients on the quantity variable are significant at the 99% level for all crops except valencia oranges which is significant at the 90% level. The coefficients on the carryover variables for almonds and walnuts are also significant at the 99% confidence level. Note that a unit of carryover for either crop has approximately double the impact on prices as does the same unit of current production.

The coefficients on quantity of substitutes for navel oranges and almonds are relatively small and both are insignificant. Efforts to specify substitues for lemons, avocados and grapes were unsuccessful. Variables for production of these crops in other states added nothing to the explanatory power of the equations. Neither did variables for quantities of bananas, apples and pears.

The coefficients for per capita disposable income are significant at the 99.5% confidence level for all crops except lemons and the coefficient for lemons is significant at the 85% level. Estimated coefficients for the time variable indicate that prices have been

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[5] One could argue that, if the coefficient measuring the impact of tax reform is not significantly different than zero at a high confidence level, it should not be used to estimate the impact of tax reform in the simulation model. The estimated coefficients are, however, the best estimates available and they are consistent with the theoretical model employed. The reader should note that the confidence placed in the estimated impacts of the tax reform will vary by crop.

[6] A two-tailed t-test and a 95% confidence level was utilized to determine statistical significance.

TABLE 3. Average Per Acre Yields for Selected California Tree and Vine Crops as a Function of Time, 1960-1978.

Crop[a]	Constant	Time Coefficient	R^2	Average Yield
Navel Oranges	207.33 (9.00)[b]	.8068 (.40)	.009	215[c]
Valencia Oranges	204.44 (5.72)	2.7544 (1.38)	.100	251[c]
Lemons[d]	5.56 (73.48)	.1475 (4.32)	.520	358[c]
Almonds	.5492 (6.67)	.0083 (1.80)	.159	.6900[e]
Walnuts	.4530 (8.40)	.0330 (6.98)	.741	.7832[e]
Avocados	1.8363 (4.51)	.0815 (2.21)	.224	2.7116[f]
Grapes	7.1995 (16.21)	−.0126 (−.32)	.006	7.0732[f]

[a] The dependent variable is average yield per acre.

[b] Figures in parentheses are t-statistics.

[c] Boxes per acre.

[d] The lemon yield equation is estimated linear in logarithms, i.e., $\ln YL = \ln a + b \ln Time$ where a is the constant and b is the coefficient for Time

[e] Tons per acre (in-shell).

[f] Tons per acre.

trending upward for lemons and downward for navel oranges, almonds, walnuts and grapes. There was no significant price trend for either avocados or valencia oranges.

Two dummy variables were used to account for unusually high prices for almonds in 1973 and grapes in 1973-1974 which could not be explained with traditional demand variables. Perhaps the unusually high commodity prices during this period, some of which was due to speculation, affected these two crops. Given the purpose of the price equations, it appears worthwhile to include the dummy variables.

Simulation Results

Model components are joined together within the framework illustrated in Figure 1 to simulate behavior of plantings, acreage, production and prices of each crop both with and without current development cost capitalization provisions for citrus and almonds. The difference between the with and without cost capitalization alternatives is incorporated through the coefficients for the tax reform dummy variables. The sequence of calculations performed for each crop is outlined in Figure 2. Actual values for each of the variables shown in step 1 of Figure 2 are entered for each year during the period 1970-1978. Projections for the years 1979-1985 require insertion of assumed values for the variables in Figure 2. The assumed values of the variables for the projections are as follows:

- Population is the series II projection of civilian population in the 48 contiguous states.
- Per capita income, prices paid for production items, and the farm labor index use 1979 values.
- Carryover and quantity of substitute crops are the five-year average 1975-1979.
- Yield is the trend projection, if significant, or the average yield for the period 1960-1978.

TABLE 4. Estimated Farm Level Price Equations for Selected California Fruit, Nut and Vine Crops, 1960-1978.

	Variables							Summary Statistics	
Crop	Constant	Quantity Produced	Carryover	Quantity of Substitutes	Per Capita Disposable Income	Time	Dummy	R^2	Durbin-Watson
	Coefficients								
Navel Oranges[a]	6.52 (15.67)	−.0357[e] (−6.12)		−.0002[i] (−.17)	.0021 (7.84)	−.3748 (−4.33)		.92	1.39[k]
Lemons[a]	6.14 (7.01)	−.0667[e] (−6.66)			.0004 (1.32)	1.068 (1.31)		.88	1.36[k]
Almonds[b]	386.93 (5.02)	−627.60[f] (−5.26)	−1451.84[f] (−4.37)	−24.85[h] (−.34)	.5280 (8.77)	−52.50 (−4.80)	498.97 (6.30)	.97	2.20[j]
Walnuts[b]	524.55 (8.06)[d]	−764.30[f] (−4.66)	−1601.50[f] (−5.67)	−84.65[g] (−1.21)	.2910 (7.31)	−13.01 (−1.29)		.95	1.80[j]
Avocados[c]	207.68 (5.51)	−1888.81[f] (−12.70)			.2513 (17.72)			.95	1.50[j]
Grapes[c]	36.71 (2.23)	−3.01[f] (−3.29)			.0550 (13.06)	−5.15 (−4.44)	49.53 (7.35)	.99	1.89[j]
			Quantity of CA Navel Oranges	Quantity of Other Oranges					
Valencia Oranges[a]	6.21 (12.34)	−.0103[e] (−1.44)	−.0241[e] (−3.85)	−.0050[i] (−5.68)	.0011 (10.30)			.92	2.02[j]

[a] The dependent variable is farm price per box.

[b] The dependent variable is farm price per ton (in-shell).

[c] The dependent variable is farm price per ton.

[d] Figures in parentheses are t-statistics.

[e] The quantity variable is boxes per 1000 population.

[f] The quantity variable is tons per 1000 population.

[g] The substitutes are the combined quantity per 1000 population of almonds, filberts and pecans produced in the U.S.

[h] The substitutes are the combined quantity per 1000 population of walnuts, filberts and pecans produced in the U.S.

[i] The boxes per 1000 population of oranges produced in states outside California.

[j] Accept, indicates that the hypothesis of no serial correlation cannot be rejected at the 1 percent level of significance.

[k] The test for serial correlation is inconclusive at the 1 percent level of significance.

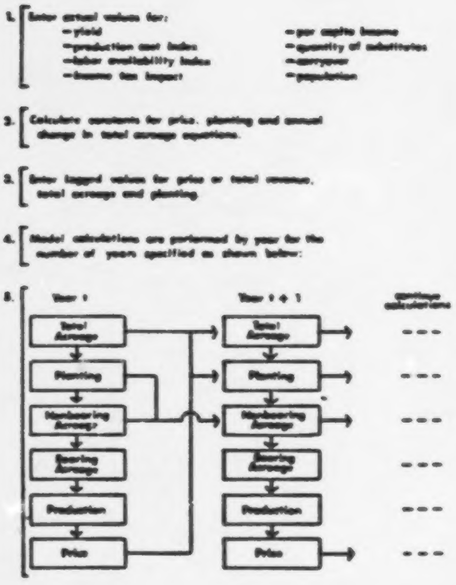
1. Enter actual values for:
—yield
—production cost index
—labor availability index
—income tax impact
—per capita income
—quantity of substitutes
—carryover
—population
2. Calculate constants for price, planting and annual change in total acreage equations.
3. Enter lagged values for price or total revenue, total acreage and planting.
4. Model calculations are performed by year for the number of years specified as shown below:
5.
Year t
Year t + 1
continue calculations
Total Acreage
Planting
Nonbearing Acreage
Bearing Acreage
Production
Price
Total Acreage
Planting
Nonbearing Acreage
Bearing Acreage
Production
Price

Figure 2. Sequence of Calculations for Simulation of Acreage, Production and Price.

Each component of the supply response model has been analyzed and tested for significance but this does not guarantee that the entire model will perform as desired. Since the purpose of the model is to measure the impact of tax reform on acreage, production and prices for selected perennial crops, it must be able to generate estimates of these variables which closely track the actual data series. A comparison of actual and simulated values assuming current tax provisions (with tax reform results) for the years 1970 to 1978 indicates that the model does well at identifying turning points and is able to closely track total acreage, production and prices. Calculation of root-mean-square percent error statistics, as suggested by Pindyck and Rubinfeld [pp. 360-367], yields values ranging from .36% for walnut total acreage to 4.48% for navel orange price (Table 5). The lower the RMSPE the more precise are the model estimates. The model generally does an excellent job of estimating total acreage and production and provides acceptable estimates of farm prices.

The annual estimated impact of tax reform provisions for the period 1970-1985 is mea-

TABLE 5. Root-Mean-Square Percent Errors for the Test of the Simulation Model, 1970-1978.

	Variables		
Crop	Total Acreage	Production	Farm Price
	root-mean-square percent error		
Navel Oranges	.0046	.0077	.0448
Valencia Oranges	.0060	.0084	.0358
Lemons	.0040	.0124	.0416
Almonds	.0045	.0355	.0303
Walnuts	.0036	.0076	.0313
Avocados	.0153	.0186	.0393
Grapes	.0058	.0045	.0147

Source: Calculated from Carman [1980, pp. 27-59]. The formula for calculating root-mean-square percent error (RMSPE) is:

$$\text{RMSPE} = \frac{1}{T}\left[\sum_{t=1}^{T}\left(\frac{Y_t^s - Y_t^a}{Y_t^a}\right)^2\right]^{1/2}$$

where T = number of sample periods

Y_t^s = simulated value of variable

Y_t^a = actual value of variable

sured by the differences between the two simulated series for total acreage, production and price. The simulation model results indicate that the impacts of development cost capitalization requirements for citrus and almonds vary significantly by crop. There was a large decrease in citrus acreage and production but only a small decrease for almonds. A shift in investor interest to grapes and walnuts resulted in increased acreage of those two crops. The impact on avocado development was barely discernible.

A summary of the simulated percentage impact of tax reform on the seven crops studied for three years in the study period is presented in Table 6. The immediate impact of tax reform on navel orange acreage, production and price was modest. The impact increases through time, however, with a 1978 estimated decrease in bearing acreage and production of 7% resulting in prices 3.8% higher than without reform. Valencia orange and lemon acreage were over 10% lower in 1973 with reform than without. This difference increases through time with projected 1985 production over 27% below what it would have been without reform. This acreage impact is the largest for the seven crops studied. The percentage impact on valencia orange prices is small and probably understated. The projected price increase doesn't include the impact of decreased production in other orange producing states.

The simulated impact of tax reform on almonds is small and is projected to increase very little through time (Table 6). The percentage impact on 1978 and 1985 production and prices is less than 1%. There is a greater simulated impact for walnuts and there is also evidence of increased cyclical production and price behavior with tax reform. Total acreage increases by 9% in 1978 and is then projected

TABLE 6. Simulated Percentage Impact of Tax Reform on Total Acreage, Bearing Acreage, Production and Prices of Selected California Perennial Crops, 1973, 1978 and Projected 1985.

Crop	Years	Total Acreage	Production	Price
		percent difference		
Navel Oranges	1973	− 2.78	− 3.75	3.85
	1978	− 5.12	− 7.06	3.78
	1985	− 7.54	− 10.46	7.89
Valencia Oranges	1973	− 10.10	− 11.69	3.34
	1978	− 17.39	− 21.15	3.25
	1985	− 19.03	− 27.18	4.92
Lemons	1973	− 11.70	− 7.27	6.90
	1978	− 21.36	− 18.90	14.96
	1985	− 21.04	− 27.42	31.81
Almonds	1973	− 0.96	1.41	− .33
	1978	− 1.96	.74	− .21
	1985	− 2.11	− .99	.49
Walnuts	1973	2.29	− 3.61	4.51
	1978	9.00	.88	− .41
	1985	1.95	6.12	− 2.72
Avocados	1973	.43	.88	− .48
	1978	− .43	.49	− .56
	1985	.14	0	0
Grapes	1973	9.95	− 5.69	2.01
	1978	14.68	10.30	− 2.37
	1985	14.32	12.92	− 3.40

Source: [Carman 1980, pp. 27-59]. All percentage calculations use the without tax reform simulated results as the base.

to decrease. As total acreage decreases, bearing acreage increases with changes in the relative proportions of bearing and nonbearing acreage.

Tax reform has a very small simulated impact on avocados through 1978 with the projection showing no impact by 1985. Model results show that the hypothesized shift in investor interest to avocados was very small.

There was a significant shift to vineyard development associated with tax reform for citrus and almonds. Simulation results indicate that tax reform was responsible for an increase in total grape acreage of 9.95% in 1973, increasing to over 14% in 1978 and 1985 (Table 6). Bearing acreage and production initially decreased in response to tax reform and then increased to 10.3% over the level without reform with a further 2.6% increase through 1985. The estimated 1978 decrease in grape prices due to increased acreage is 2.37%.

Summary and Conclusions

A perennial crop supply response model is specified and estimated for navel oranges, valencia oranges, lemons, almonds, walnuts, avocados, and grapes. The model is then used to estimate the annual impacts of citrus and almond tax reform on acreage, production and prices for each crop for the period 1970-1985. Navel orange, valencia orange, lemon and almond acreage and production decrease in response to tax reform. The estimated decrease in 1978 total acreage ranges from 21% for lemons to 2% for almonds. Reductions are projected to continue through 1985. Acreage and production of walnuts and grapes increased in response to tax reform for citrus and almonds. The 1978 total acreage increase is 9% for walnuts and 14.7% for grapes. Avocados show almost no response to tax reform for citrus and almonds.

A brief review of testimony on the Tax Reform Act of 1969 reveals an apparent desire to curb citrus grove development by nonfarm investors. The possible shift of investor interest to other crops was not an issue at the time. A year later, however, the citrus provision was extended to almonds because of increased interest in almond orchard development as a tax shelter.

The effects of selective changes in tax rules can be dramatic as investors and developers switch among crops to take advantage of favorable provisions. Model results indicate that 1978 California citrus and almond acreage decreased 46,241 acres due to cost capitalization provisions effective in 1970 and 1971. At the same time, walnut and grape acreage was estimated to be 99,163 acres greater as a result of citrus and almond cost capitalization. Acreage of crops not inclued in the analysis, such as pistachios and kiwi, probably also expanded as investors took advantage of the favorable tax treatment available for these other crops. The problem of nonfarm investment in orchard development simply shifted from citrus and almonds to other crops with the imposition of capitalization requirements. It appears that increased investor interest in grapes and walnuts added to the cyclical instability of production and prices for these two crops. The impacts continue for many years because of the extensive time lags in perennial crop development.

Tax incentives for orchard development certainly increase the demand for land suitable for orchards and increase its price. At the same time, expanded acreage of an orchard crop may result in a lower value for the trees. Tax incentives have significant structural implications. The number of farms growing a particular orchard crop and average acreage are affected. Conditions of entry vary depending on the current income and tax bracket of the developer. High income investors have a decided advantage.

References

Baritelle, John L. and David W. Price. "Supply Response and Marketing Strategies for Deciduous Crops." *American Journal of Agricultural Economics* 56(1974): 245-53.

Bushnell, Peter G. "Dynamic Analysis of the World Almond Market and the United States Almond Marketing Order." Ph.D. Thesis, University of California, Davis, 1978.

Carman, Hoy F. "Tax Loss Agricultural Investments After Tax Reform." *American Journal of Agricultural Economics* 54(1972): 627-34.

______. "The Estimated Impact of Orchard Cost Capitalization Provisions on California Orchard Development." Report submitted to U.S. Dept. of Agr. Structure Project, September 1980.

Carman, Hoy F. and David E. Kenyon. "Tax Shelter Aspects of Orchard Development Before and After Tax Reform." *HortScience* 7(1972): 105-107.

Carman, Hoy F. and James G. Youde. "Alternative Tax Treatment of Orchard Development Costs: Impacts on Producers, Middlemen and Consumers." *American Journal of Agricultural Economics* 55(1973): 184-91.

Dangerfield, Jeanne. "Sowing the Till." *Congressional Record* 119, No. 74(1973): S9248-55.

French, Ben C. and Raymond C. Bressler. "The Lemon Cycle." *Journal of Farm Economics* 44(1962): 1021-36.

French, Ben C. and Jim L. Matthews. "A Supply Response Model for Perennial Crops." *American Journal of Agricultural Economics* 53(1971): 478-90.

Krause, Kenneth R. and Harvey Shapiro. "Tax-Induced Investment in Agriculture: Gaps in Research." *Agricultural Economics Research* 26(1974): 13-21.

Lin, William, H. F. Carman, C. V. Moore and G. W. Dean. "Producer Response to Income Taxes: An Empirical Test Within a Risk Framework." *National Tax Journal* 27(1974): 183-95.

Minami, Dwight D., Ben C. French and Gordon A. King. *An Econometric Analysis of Market Control in the California Cling Peach Industry.* Giannini Foundation Monograph No. 39, University of California, Berkeley, 1979.

Pindyck, Robert S. and Daniel L. Rubinfeld. *Econometric Models and Economic Forecast (2nd Edition).* McGraw-Hill Book Company, New York, 1981.

Rae, Alan N. and Hoy F. Carman. "A Model of new Zealand Apple Supply Response to Technological Change." *The Australian Journal of Agricultural Economics* 19(1975): 39-51.

Scofield, William H. "Nonfarm Equity Capital in Agriculture." *Agricultural Finance Review* 33(1972): 36-41.

Sisson, Charles A. *Provisions of Importance to Agriculture in the Tax Reform Act of 1976.* Washington, D.C.: USDA ERS-645, 1976.

Thor, Peter K. "An Economic Analysis of the Marketing Orders for the California-Arizona Orange Industry." Ph.D. Thesis, University of California, Davis, 1980.

Senator **Jepsen**. Thank you.

As a chairman's prerogative, I will proceed on the basis of geography here and we will get the next furthest away and that would be Mr. Neil Harl from Iowa State University. He's a distinguished professor of agricultural economics from Iowa State University. Welcome. Your statement will be entered into the record as if read and you may proceed in any way you so desire.

STATEMENT OF NEIL E. HARL, PROFESSOR OF ECONOMICS, IOWA STATE UNIVERSITY

Mr. **Harl**. Thank you, Senator Jepsen, Senator Abdnor. I am Neil Harl from Iowa State University and I, too, am appreciative of the opportunity to appear today to talk about the topic of tax policy that affects agriculture.

I suppose if we were to look at the direct effects, we might not be too impressed. But if we look at all the effects of taxation upon agriculture, I think that it does rank among the more significant variables even in these economically troubled times.

My written comments are in four parts. The first part is to touch briefly upon what I believe is the overarching need today with respect to tax policy as it affects agriculture, and that is the problem of the deficit, and we will talk just briefly about that.

Second, the potential mischief from tax policies that appear very sound on a microbasis. That is to say, they appear sound to a farmer or a rancher who takes a look at investment tax credit for example. It is almost an irresistible impulse by that person to support a tax change. And yet on a macro or aggregate basis, the results are often almost the opposite of what appeared at first glance on a microbasis.

The third is to consider the effects of the tax system on capital flows, the movement of capital into agriculture, out of agriculture, the importance of that.

Finally, to look at the question not of income tax but of the other transfer taxes as well.

Before taking up those four major themes briefly, and they are laid out in full in the paper itself, I would like to simply touch very briefly upon the fact that we are dealing with a structure that is in today's world at least fairly unique. There aren't very many sectors left where there's a base of family ownership, family management, and essentially family control.

Agriculture has economic difficulties today and I think that if we aren't careful with respect to tax and other policies, we might do some damage to that system which I think is a system that has served not only the United States but the world rather well in terms of efficiency.

I would point out that size of firm is a big factor here and size is influenced by many things. It's influenced very heavily by economies of scale and we cite data indicating about where the most economic size is. I think that we would be trying to push against the inevitable if we were to try to avoid those effects, but I think that we should be careful we do not change the cost curve through the tax system, that we not provide a benefit for someone based on something other than the economies of production scale.

Also, I would like to mention ease of entry. The health of the family farm system is heavily dependent upon ease of entry. As long as we have opportunity for young people to get started in a sector in which the farm business has typically been born and dies in a lifetime, a basic family farm orientation is more likely. So again, we want to be sure that we do not erect barriers to entry. Tax policy can do that if we aren't careful.

Also, tax policy can affect transfer of assets at death. Again, that has to do with barriers to entry. Also, the capital flow question, tax policy can affect that.

Finally, in this introductory part, there's a matter of timing. I understand Senator Abdnor's comment about the amendment on the floor of the Senate and I watched that with a great deal of interest. I think that we need to be careful with respect to timing because agricultural markets now are rather soft and if we are going to make changes with respect to capital flows, then we want to be sure we don't do it at a time that might exacerbate our problem, but I certainly understand the point that the Senator was making. So if we were, for example, to consider placing a cap on the amount of farm losses that could be deducted against non-farm income, we ought to be sure we do that at a stage in the cycle where additional damage could not occur because of the added weakness that could come in factor markets.

To move on to the first of the four points, that being the point with respect to the matter of budget deficits, farmers are suffering today from a great deal of economic difficulty. I think it's attributable to four things. I think it's attributable to adverse weather conditions in recent times and that we cannot do much about, not last year, not this year, not next year.

Second, farmers are suffering from the effects of extremely high real rates of interest, almost unprecedented. We are setting some modern day records.

Third, land values have dropped sharply as the rate of inflation has been reduced and interest rates have remained quite high in real terms.

Finally, overexpansion in the decade of the 1970's was a factor as a belief was abroad in the land that we would always be able to repay loans out of inflationary gains if we could not out of income.

To indicate the amount of indebtedness that exists expressed in relation to income, we have seen indebtedness in farming grow to a level of about $215 billion in total. We have seen that as a percentage of income going from approximately 200 percent of income in 1960—actually 215 percent of income in 1960, to something close to 800 percent of farm income in 1981. We have seen a quadrupling of indebtedness as it relates to farm income. In a world of noninflation or low inflation, those indebtedness amounts must be paid out of income. So farmers with high and rising debt loads are caught in the worst of all worlds—falling land values and high real rates of interest. I would say that of all the points I will make today, none ranks with the importance of bringing interest rates in real terms to a more reasonable level.

Although there is some modest difference of view among economists on that point, I really think that the evidence is overwhelming that deficits do indeed matter, and so I would plead with the committee to do whatever it can to reach a closure with respect to the deficit because no other combination of tax breaks or provisions will rival or come close to the adverse impacts the deficit will bring. In fact, I think it may be approaching a time when a consistently and severely unbalanced budget is a matter of national security. I think that we are much more at risk with respect to this issue than some others.

Now to move on to the second point, which is partly an educational matter. Maybe we haven't done a very good job, those of us at land grant universities, at least not as good a job as we should have done. That is, as we consider a tax provision for change, we simply must realize we are talking tax policy. We are talking in many cases about the aggregate effect. In recent times numerous individuals have engaged in conversation and have indicated to me—how can I communicate to my Senator or my Representative to be sure that a particular tax break will be continued, and in the next breath, show concern and deeply so, that in fact they are practically on the ropes with respect to the effects of high interest rates. So we must realize that there is a macro or aggregate effect of the policies that we put in place, even though in the real world in microterms we see and understand tax breaks. We know what a 10-percent investment tax credit on a confinement livestock facility will do; it's a little less clear what it will mean in the macro sense.

To move on to the next section, it has to do with impacts on production, and that's really, I think, the heart of what we will focus upon today. We know that whenever we have a tax change that has the effect of reducing the cost of production, we can predict at least the direction—maybe not the magnitude, but we can predict the direction at least—of the impact. This has been a process that has gone on for 75 years or more. As technology has come into agriculture, it has often lowered the cost of production relative to what existed before the introduction. It has meant an increase in supply and lower prices and ultimately consumers benefit.

So, as Professor Carman was indicating, this is indeed related to the question of whether we have a food policy that assures food at the lowest possible cost and I suppose maybe one way to aid that would be to have some tax breaks for farmers. That is not widely perceived as the case, however. It's perceived that those are somehow pocketed by the farmer, but in most cases the gains indeed are translated into lower prices and in lower costs to the consumer in the supermarket for food.

As an example, I'd like to look at the income tax treatment for single-purpose agricultural structures. Investment tax credit was extended to confinement livestock facilities in the Revenue Act of 1978. Some of you may recall that there was a great deal of lobbying during the 1970's for extension of the 10-percent investment tax credit to the single-purpose agricultural structure. The belief was that this was needed. We still don't have good quantitative evidence, but we are fairly sure—and I think the industry itself now recognizes the point—that by reducing the real costs of an investment in a single-purpose agricultural structure, a confinement livestock facility by 10 percent, it made some projects feasible that would not have been feasible at 100 percent of the cost. So that led, we would presume, to greater production of hogs and if we know anything about elasticity of demand, it led to some reduction in the price of hogs. The supermarket had a greater supply at a lower price.

This is just an example of the kind of effect we are talking about.

I would like to mention also a deduction that's been around for quite a long time, that for land-clearing expenses. Again, it looks sound on a micro basis, but at a time when we are concerned about levels of production as we approach the 1985 farm bill, and have been in preceding farm bills, it does seem a bit anomalous that we are providing a deduction for the clearing of land to make it suitable for use in agricultural production. Certainly this is in keeping with a notion of expanding production, but I'm not confident that is the governing policy.

I think that the message in this is reasonably clear. The proposed changes that affect crop production ought to be approached with relative care.

The next major segment of the statement talks about flow of capital and how the flow of capital may be changed. Since the late 1960's, the Congress has been engaged in an effort to try to narrow or to contain the effects of the cash method of accounting in farming. It isn't just the cash method of accounting; it's the interplay between the cash method of accounting and the biological processes of agriculture. Those together provide opportunities for tax shelter and I have mentioned four basic ways in which that is done.

The objective, of course, for the investor is to be able to get a deduction from ordinary income upfront and transform that into long-term capital gain down the pike. That's the way it was before 1970 with respect to cow-calf herds, for example.

Another possibility involves a stretchout of income—the income will come later but you get an upfront deduction. Prepaid expenses fall into that category and, of course, the time value of money is very important. I've noticed that the current tax bills do have a provision within them dealing with the time value of money. In a world of high interest rates, the time value of money is awfully important so if you can advance the expenditures, get a deduction, and put off paying tax on the income, that comes with an economic advantage for a high tax bracket taxpayer.

Third, we have different tax entities with different tax rates. The gradual reduction in the corporate rate, for example, from the 30-percent level which existed quite a number of years ago, down to the 15-percent range today, should be viewed in juxtaposition with the rate structure of individuals.

The effort has generally been to try to narrow the advantage of cash accounting. It is a very difficult question whether we should at some point raise the question: Is cash accounting worth all the problems that it's creating and all the complexity it's adding to the code? As part of my first efforts in Washington in 1967, I was asked for a commentary on the effects of cash accounting, and I guess my feeling is about the same today. We have to, at a minimum, continue to build a fence around cash accounting or we will have abuses that relate to it.

One of the problem areas today is prepaid inputs. There's been some narrowing of that with the farm syndicate rules. There's another limit in the current tax bill. I think that the prepayment problem is a significant one.

Also, I mention the question of 15-year real property that was alluded to earlier in the ACRS system. I would like to mention that this is an area of potential tax shelter activity. I suppose one of the best ways of looking at this is to take a very specific case. Let's assume that we have someone who buys a farm for $800,000 but let's say $200,000 of that is allocated to what we call section 1250 property, or property that is subject to 1250 depreciation recapture. What that means is that the depreciable property can be placed on a depreciation schedule with 15-year straight line cost recovery and recover the cost over a 15-year period. The farm can then be sold and because 15-year straight line depreciation was used, the gain allocated to that item is long-term capital gain. A classic conversion of ordinary deductions into long-term capital gain results.

This is severe enough that it makes me wonder if we should not take a careful look at section 1250 depreciation recapture. I wonder if the time hasn't come—and it isn't just in agriculture—in fact, this is a more pernicious problem outside of agriculture than it is within—to repeal section 1250. The ACRS system did alter and reduce the scope of section 1250 but it did not repeal it. I think it should be viewed realistically as a candidate for repeal, with all depreciation recapture handled under section 1245.

The distinction is this: Under section 1245, if that same building had been depreciated from $200,000 down to zero, all the gain would have been ordinary income on the sale unless it was worth more than was paid for it. That's the way machinery is handled now. It's the way breeding stock is handled now. It's the way tile-lines and fences are handled now. For a heavily improved farm, this could be an area of tax shelter and I think that not only here but in real estate depreciation generally we should look very carefully at section 1250.

I would mention also that the 5-year classification for a lot of property in the ACRS system has created a very, very rapid writeoff, much more rapid than was thought. The reason is that the 5-year classification is the residual. If it doesn't fit anywhere else, it's 5-year property. If it isn't 3-year or 10-year, it's 5-year property. So what has gone into that 5-year category is all property eligible for investment tax credit—fences, tile-lines, silos, corncribs, grain bins—all of those are 5-year property and I think that is a very short period for some of those items because we were previously depreciating many of those assets over 30 years and, in some cases, 40 years. To go to 5-year or 5-year accelerated cost recovery, is indeed a very, very rapid depreciation scheme.

Agriculture is vulnerable right now, vulnerable to off-farm investor activity, because of its weakened state. So I think we need to be especially cautious about investor activity. We are seeing now some discussion about inducing equity capital to go into agriculture to broaden the risk-bearing fund because traditionally the farm family has provided the risk-bearing capital. As agriculture has fallen on very difficult times, some have argued that maybe what we should do is induce equity capital into agriculture. I think that, as a practical matter, would be very difficult to pull off. For one thing, there's no convenient mechanism for channeling equity capital into farm firms. Second, I'm not certain that farmers would really appreciate or welcome equity capital. Farmers tend to be a rather independent group and they really haven't lived with outside equity capital within the firm.

The third is I'm not sure investors are that interested in investing in minority interests that have a cash flow as small as is the case in agriculture.

So I doubt that it is realistic to talk in terms of inducing equity capital flow. Moreover, I would have a bit of concern because it would have the potential, perhaps, for changing the face of the family farm structure. I believe such change should be evolutionary and that tax policy should be neutral with respect to inducing capital flow. I think we should strive for neutrality so that we neither induce nor inhibit the movement of equity capital into agriculture.

Clearly, agriculture must stay firmly attached to the capital markets, but I think that actual economic advantage, a combination of risk and return, should be the governing factor, not tax policy. If we can make it neutral, I think that should be what we should strive to do.

As the final point, I think we should not lose sight of the fact that the rules for the transfer of wealth from one generation to the next should also be viewed in a policy context. We have in recent times seen a move away from a tax on wealth at death and I think you can make a fairly good case that agriculture is well served by a system that does not result in an aggregation of wealth and the creation of a wealthy landed gentry. I think there is a role to be played by the tax system.

In conclusion, I think it's not unreasonable for tax policy to be either neutral with respect to structure and to economic advantage or disadvantage by size and type of firm, or to be consistent with other policies that are in place. At a minimum, I think tax policy should first, not decrease the cost of production for larger over smaller firms; second, not induce investment in agriculture for nonfarm investors to a greater degree than is done in other sectors, that is, to strive for neutrality, and third, not to encourage concentration of land ownership in the hands of a landed gentry. Even more importantly I think tax policy should be expected to contribute revenue sufficient to support politically acceptable program levels such that the economy does not incur significant budgetary deficits in times of economic recovery.

Thank you.

[The prepared statement of Mr. Harl follows:]

Prepared Statement of Neil E. Harl[*][**]

Notwithstanding that the tax system in the United States has undergone dramatic and unprecedented change in the past decade, it is entirely possible to overstate the direct effects of taxation upon the structure of the agricultural sector, the nature of firms within that sector and the economic fortunes of those involved in farming and agribusiness. If the indirect effects of taxation were considered as well, the combined impacts would, however, rank among the most significant variables affecting agriculture even in these economically troubled times.

In this statement, emphasis is placed upon the direct and indirect effects of the tax system on agriculture with particular attention to four dimensions of the problem--(1) the overarching need to restore revenue to the federal tax system or otherwise reduce the federal budget deficit, (2) the potential mischief from tax policies that appear sound on a micro basis but cause quite different effects when considered in the aggregate or on a macro basis, (3) the importance of considering the effects of the tax system on investment from outside the agricultural sector, and (4) the expected impacts on agriculture of a reduced effort to curb the concentration of wealth.

I.

Before taking up the four major themes, a few words should be said about the family farm system which has characterized much of agriculture in this country since the early days of the republic. Except for California, Florida, Hawaii and California, large investor-owned farm and ranch operations have been and continue to be relatively rare.[1] With family farm and ranch units, the family provides all or nearly all of the equity or ownership capital, supplies all of the management and furnishes most of the labor for the operation. Even though more than 80 percent of the farms and ranches are organized as sole proprietorships, a significant number function as partnerships and corporations.[2] Although some Congressional enactments in the last decade assume otherwise, notably special use valuation of farmland and 15-year installment payment of federal estate tax, farm businesses are typically born and die within the generation of their founding.[3] Land may remain within the family from generation to generation but the farm business has usually terminated at the retirement or death of the farmer or rancher.

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The size of farms and ranches is heavily influenced by the relationship of cost per unit of output to scale of operation. Over the long term, the size of farms and ranches tends to reflect cost considerations. While the least cost point for production varies by type of operation, under Corn Belt conditions research has consistently indicated that the economies of scale have been largely achieved by farms of about a section in size (640 acres).[4] Economies beyond that point relate to cost advantages in quantity purchasing of inputs and the price advantages from marketing larger amounts of output.

In terms of the impact of tax policy on family farms, several points merit mention.

- Ease of entry by beginning farmers is vital to maintenance of a family farm structure. Barriers to entry may come in the form of nonavailability of land and other inputs at a cost consistent with the price of agricultural products. Thus, factors--including factors relating to tax policy--that tend to drive up the cost of land and other inputs may contribute to barriers to entry. Some tax provisions tend to become capitalized into land values and may contribute to values above the level that can be paid by those without the tax advantage.

- Another barrier to entry may come from provisions that tend to reduce the alienability or transferability of inputs, notably land. Again, special use valuation of land and 15-year installment payment of federal estate tax fall into that category. With special use valuation of land, most transfers outside the family are precluded for at least 10 years after death. The low income tax basis from special use valuation discourages taxable transfers even beyond the period for federal estate tax recapture. For 15-year installment payment of federal estate tax, any transfer during the period of 177 months after death (14 years and nine months) counts against the maximum transfer allowed without termination of installment payment.[5] If 50 percent or more of the decedent's interest is sold, exchanged or otherwise disposed of or is withdrawn from the business, the installment payment arrangement is terminated.[6]

- Another barrier to entry may come in the form of tax advantages for larger operators that would provide a systematic advantage at a point on the cost curve beyond the point of least cost per unit of output. Most of the flat tax proposals would provide such an advantage, at least relative to the income tax burden under current law.[7]

- Changes in the tax structure that induce capital flows into agriculture should be evaluated with care. The presence of some non-farm investment in agriculture lowers the barriers to entry by making farmland available on a rental basis to beginning operators and others with a highly limited capital base. A policy of full ownership of land by operators would, over time, create substantial barriers to entry. A pattern of mixed ownership by bona fide farmers and those outside the agricultural sector contributes to a healthy agriculture over the long term.

Tax policies that induce sharp increases in investor capital flowing into agriculture tend to elevate the price of land, breeding stock and other inputs. The result may be higher barriers to entry by beginning farmers and those with a limited capital base.

A word of caution is in order with respect to timing in adopting changes in tax law that would discourage the flow of investment capital into farming. At a time, as now, when the market for farmland and some other inputs is indeed soft, triggering further sales by inducing the tax advantages from such investments could have a negative effect. Placing a cap on the amount of farm losses that could be deducted against non-farm income is an example of such a move that would have a substantial negative impact on non-farm investors in farmland. Ideally, changes in the direction of discouraging the flow of investor capital into agriculture should not come at the bottom side of the economic cycle for farmers.

II.

In tax policy, one of the most difficult tasks for taxpayers is to evaluate the macro effects of changes in tax law that appear irresistibly attractive on a micro basis. This problem is clearly manifest--(1) in understanding the effects of changes in tax law on federal revenues and the impact of revenue shortfalls on interest rates and (2) in understanding the impacts of changes in tax law on levels of production and the long-run implications for producers and consumers. The first point is discussed in this section; the second is discussed in the next section. Without a doubt, one of the major challenges of the 1980's is for taxpayers to acquire a greater sense of understanding of the economic linkages between tax rules, fiscal policy and monetary policy.

At present, the most significant feature of federal tax policy for farmers and ranchers relates to the enormous and growing federal budget deficit.[8] The numbers are well known to this group and need not be repeated. What may be less well known are the ways in which agriculture is being impacted by the huge budget deficit for the current federal fiscal year and by an expectation of even larger deficits for the foreseeable future. Tax legislation now in process represents a heartening move toward closing the gap but will not, alone, be sufficient.

The current economic woes of farmers are traceable to several factors--(1) adverse weather conditions in some parts of the country during the 1982 and 1983 growing seasons, (2) real rates of interest at levels rarely encountered in the past, (3) over-expansion in the decade of the 1970's under an assumption of continued inflation and (4) sharp drops in land values as the rate of inflation has been reduced and interest rates have remained high.[9] Of the four factors, the single most significant appears to be the decision by the Federal Reserve Board in 1979 to reduce the rate of inflation in the United States.[10] Over the following four years, that action led to conditions of tight money, high interest rates and a dramatic slowing in the rate of inflation. The result, for farmers, has been falling land values and high real rates of interest, sufficient to cause lenders to develop concerns about a substantial proportion of their farm borrowers.[11]

The amount of debt held by farmers has risen sharply in recent years. In 1971, total farm debt outstanding in the United States totalled slightly more than $54 billion.[12] As recently as 1976, the amount of farm debt was about $91 billion.[13] In the next eight years, the figure increased to $215 billion.[14] As a percentage of net farm income, farm debt stood at 215 percent in 1960, rising to 334 percent of net farm income in 1975 and climbing to 795 percent of net farm income in 1981.[15] Unless inflation permits payment from increases in asset values, indebtedness must be paid from net income.

Farmers with high and rising debt loads,[16] thus are caught with the worst of all worlds: falling collateral value as farmland values have declined and high real interest rates that persist at near record levels. Had nominal interest rates declined along with the drop in the inflation rate, as would normally have occurred, farmers and other debtors would have faced substantially less economic difficulty than is now the case.

Although there is not unanimous agreement among economists, the evidence is overwhelming that large budget deficits contribute to high interest rates. Interest rates represent, essentially, the price of credit and heavy government borrowing plus private sector borrowing impose a heavy demand for money in times of large budget deficits and significant economic activity. Constraints on the supply of money assure that the price of credit will rise with increase in the demand for money.

High interest rates have four distinct effects on farm firms. High interest rates--(1) increase the direct cost of production credit for use in the operation and raise the interest cost for land under variable rate mortgages; (2) give strength to the foreign exchange value of the dollar with the result that farm products are more expensive in export channels with a resultant drop in exports; (3) become part of the cost of production for inputs purchased by farmers and, because of the competitive structure of the input supplying sectors, tend to be passed along to farmers in the form of higher input prices (for fertilizer, chemicals, fuel, seed, repairs and other inputs); and (4) increase the cost of carrying farm products in inventory with a short-term effect not unlike an increase in supply.[17] The net result of high interest rates is higher operating costs, reduced farm income and depressed land prices.

In light of the economic vulnerability of a substantial segment of farmers and ranchers, the real rate of interest takes on enormous significance. The problem goes beyond production credit. One of the products of the inflationary era of the 1970's was variable rate mortgages. High interest rates impact those farmers and ranchers who have acquired land under variable rate mortgages from the Federal Land Bank and other lenders.

For many farmers and ranchers, the economic pain from continuing high interest rates dwarfs any possible combination of benefits from the tax cuts from the Economic Recovery Tax Act of 1981.[18] The realization is becoming clearer to taxpayers that a macro price of enormous proportions is being paid for what at first blush appear to be highly attractive benefits from a micro perspective.

As we pointed out in print in August and September of 1981, the Economic Recovery Tax Act of 1981 was the most irresponsible Congressional act of this century.[19] We are now inclined to reconsider that statement. We now believe it was the most irresponsible Congressional act in the history of the republic. As a matter of tax policy, nothing now ranks with restoring a sense of fiscal sanity to the economy of this country. A severely and chronically unbalanced budget is a matter of national security.

The destabilizing effect of high interest rates in the international realm, notably in third world countries, is another deep concern of farmers, not only from the standpoint of strength of export activity in farm products but also from the standpoint of potential damage to the fabric of international lending relationships and the risk of triggering international liquidity crises. Countries with high and rising debt burdens cannot be viewed as good candidates for expanded sales of farm products from the United States.

III.

In reviewing the macro effects of tax policy for the agricultural sector, one major area of concern is the impact of changes in the tax structure that affect the cost of production. Because of the atomistic nature of most segments of the farm sector, and the inelasticity of demand for many farm products, the usual effect of changes in technology or changes in the tax system that are cost decreasing in nature is to increase production and hence supply, drive down the price and ultimately benefit the consumer, not the farmer. It was by this very process that agriculture over the past 75 years has given up people and other resources sufficient to fuel non-farm development with food production involving fewer and fewer farmers and a diminishing proportion of the capital resources of the country. Tax breaks that reduce the farmer's cost of production are indeed consistent with a policy of cheap food and are clearly in the best interests of consumers.

As an example of the aggregate effect of what appeared to be a desirable change in tax rules for agriculture, the Congress in 1978 responded to producer requests to resolve a dispute between the Internal Revenue Service and farmers over eligibility of livestock confinement units for investment tax credit[20] and to make the facilities eligible for the 10 percent credit.[21] The effect was to reduce the cost of eligible structures by 10 percent[22] and to induce construction of facilities where the appropriately amortized cost to the taxpayer of 90 percent of the full cost of the confinement unit was profitable. Although other factors were also impinging upon producer decisions during the same period, it appears that the legislation assuring the credit to confinement facilities had some impact on production and supply levels. Some taxpayers now recognize that a significant price may have been paid by producers in the aggregate for what appeared at the time to be an irresistible micro tax benefit.[23]

Another example of tax provisions impacting production costs and, hence, production and supply levels is the deduction for land clearing expenses.[24] Since 1962, expenditures made for the clearing of land to make it suitable for use in farming have been deductible currently up to the lesser of $5,000 or 25 percent of taxable income from farming.[25] Again, the probable effect has been to induce some land to be brought into production that would not have been planted to crops had the expense of land clearing been capitalized rather than deducted currently. The benefits of increased production and the resulting lower price per unit undoubtedly inured to the benefit of consumers. Moreover, during much of the 22 year period in which the land clearing expense deduction has been available, price and income support programs of the United States Department of Agriculture have been in place to idle farmland and support commodity prices above market clearing levels.

From a policy perspective, the message is reasonably clear: proposed changes in the tax system that would affect the cost of production should be evaluated in terms not only of the cost or revenue to the Treasury but also in terms of who is expected to benefit ultimately from the change and whether the change is consistent with other policies already in place. In all of the above examples, the consumer was the ultimate beneficiary of policies that appeared desirable at the micro level but resulted in increased levels of production with resultant lower prices.

IV.

Another major area of impact of tax policy in agriculture is the effect of changes in the tax structure on the flow of investment capital. Tax provisions may induce or inhibit the flow of capital into agricultural assets, depending upon the configuration of the tax system.

Much of the federal income tax legislation enacted in 1969 and 1976 was designed to neutralize tax-motivated shifts of investment capital into agriculture.[26] The basic income tax incentives have been largely of four types--(1) the combination of the cash method of accounting and the biological processes of agriculture that permitted (and still do but to a lesser degree than before 1976) conversion of deductions from ordinary income into taxation ultimately as long-term capital gain; (2) availability of the cash method of accounting and deferral of recognition of income such that expenses are incurred in one time period with income taxed in a later period; (3) the operation of taxable entities with different rates of federal and state income tax ranging from zero to the highest marginal rate for individuals; and (4) authorization of the various tax deferral options such as the opportunity to report non-recourse Commodity Credit Corporation loans as income in the year loan proceeds are received[27] or as income when the commodity is sold or forfeited to CCC.[28]

In recent years, legislative efforts have been made to narrow the scope of tax motivations of nonfarm investors to invest in farm property or farming operations based upon one or more of the four types of incentives outlined above. Until 1970, recapture rules did not apply to depreciable livestock.

Therefore, it was possible, prior to 1970, to purchase a cow-calf herd, for example, depreciate the animals to a low level and sell the herd with long-term capital gain treatment for the resulting gain. Livestock was added to Section 1245 recapture (meaning that, essentially, gain is taxable as ordinary income to the extent of allowed or allowable depreciation) beginning in 1970.[29] At the same time, the holding period for cattle and horses was extended to twice the period required for other types of livestock in order to receive long-term capital gain treatment.[30] The same legislation, the Tax Reform Act of 1969, added a further provision for the recapture of gain on disposition of "farm recapture property" to the extent the taxpayer had a balance in the taxpayer's "excess deductions account" from net farm losses.[31] The 1969 changes had a significant effect on the shelter activity, especially on shelters involving cow-calf herd purchase, depreciation and sale.

The use of limited partnerships as a tax shelter (such as feedyard activity involving cattle) with prepurchased feed and other supplies and with gain recognized in a later year was curtailed by enactment in 1976 of limits on deductibility of inputs by "farming syndicates"[32] and by legislation imposing "at risk" rules which limit deductibility to amounts the taxpayer has at risk.[33] The at risk rules, which originally applied only to partnerships, were broadened in 1978 to include all areas of investment activity in farming.[34]

Even though farming syndicates have been limited to current deductibility of feed and other inputs,[35] a substantial amount of prepurchase activity has continued by investors not falling within the farming syndicate rules. Accordingly, legislation has been proposed in 1984 to limit further the deductibility of prepurchased inputs.[36]

Since 1969, therefore, a concerted effort has been made to limit the benefits of the cash method of accounting to bona fide farmers.[37] Quite clearly, practices permitted by cash accounting have been major attractions for high tax bracket non-farm investors. The Congressional response has been to narrow the rules of eligibility for cash accounting but not to deny its use to bona fide farmers and ranchers. Apparently, farmers have paid a substantial price for continuation of eligibility for cash accounting as investment has been attracted into some areas, most notably pistachios, cattle feeding and, at an earlier time, cow-calf operations. In recent years, some farmers have raised the question whether the advantages of cash accounting were worth the disadvantageous results from induced investment activity and higher production levels with resultant lower prices to producers. If cash accounting is permitted to remain, as a matter of policy continuing attention should be given to limiting inducements to invest because of the peculiarities in the way income and deductions are handled under the cash method of accounting.

An area of potential shelter activity meriting attention is the rapid write off of depreciable real property under the Economic Recovery Tax Act of 1981.[38] The cost of much of the depreciable real property in a farm or ranch operation is recoverable over five years on an accelerated basis.[39] Tile lines, fences, feeding floors, paved drives, grain bins, silos, livestock confinement facilities, outside power and light systems and water distribution systems are all depreciable as five year property in addition to being eligible for 10 percent investment tax credit.[40] The cost of other depreciable realty is eligible for recovery over as little as 15 years. Before the Economic Recovery Tax Act of 1981 became effective, these assets were depreciated over periods of 10 to 30 years.[41]

The 1981 legislation represented a striking acceleration in cost recovery. Quite apart from the massive loss of revenue from ACRS, which was particularly dramatic in light of the sharp drop in capital spending for several months after the enactment of ERTA, the ACRS rules have created a tax shelter opportunity.

Example: On December 31, 1983, a high tax bracket taxpayer purchased a farm for $800,000. Of the total purchase price, $300,000 was allocated to four large silos, five confinement livestock units, fence line banks, fences, tile lines and four large grain bins. By using accelerated cost recovery, the taxpayer could claim $45,000 in depreciation in 1983, $66,000 in 1984 and $63,000 in each of the next three years. By the end of 1987, the $300,000 investment allocated to the depreciable items would be fully recovered, just over four years after the original purchase. If the farm were sold in 1995, the amount allocated to those depreciable assets would, of course, be taxed as ordinary income up to $300,000.

For Section 1250 property, straight line cost recovery over 15 years may be claimed with no depreciation recapture on later sale.[42] With Section 1250 assets, depreciation is recaptured only to the extent depreciation claimed exceeds straight line cost recovery.[43] Thus, depreciation deductions from ordinary income can readily be converted into long-term capital gain.

Example: A high tax bracket off-farm investor on January 1, 1983, purchased a heavily improved farm for $600,000. Of the total purchase price, $100,000 was allocated to a nearly new house on the property, $80,000 to a large steel building built for machinery storage and farm shop and $20,000 for a pole barn. All of the depreciable items, totalling $200,000 in value, were placed on the depreciation schedule with straight line cost recovery claimed over 15 years. By the end of 1997, the $200,000 amount would be depreciated to zero, having produced $100,000 in income tax savings for the investor who is in the 50 percent federal income tax bracket (not counting the value of the deductions for state income tax purposes). If the farm were sold in 1998, with $200,000 of the sales price allocated to the house, the steel building and the pole barn, the $200,000 gain would be eligible for long-term capital gain treatment taxed at a maximum rate of 20 percent with $40,000 in income tax due on the gain. Thus, at an eventual cost of $40,000, the taxpayer obtained tax benefits of $100,000.

A shift entirely to Section 1245 recapture and repeal of the Section 1250 rules would go a long way toward limiting the attractiveness of depreciable real property as a tax shelter.

A careful look should be given to whether some assets now classified as five year recovery property would more appropriately be classed as 10 or 15 year property. Particular mention is made of tile lines, concrete drainage ditches, silos, some types of storage facilities and single purpose agricultural structures.

Agriculture may be particularly vulnerable to off-farm investor activity for the next several years. Land values have fallen sharply at a time when average personal incomes in other sectors of the economy have been rising. Farmers who have been financially weakened from high real interest rates, poor crops because of adverse weather conditions and loss of asset value are not likely to be strong bidders for farmland.

With the economic problems in much of the agricultural sector, some concern has been voiced over the heavy reliance of farm firms on debt capital and the impact of economic adversity on the equity capital base provided almost exclusively by the farm family. The suggestion is that economic incentives be created for non-farm equity capital to flow into farm firms with a consequent broadening of the risk-bearing fund. This argument should be evaluated carefully in light of the unique features of farm firms.

- First, with more than 80 percent of the farm businesses operated as sole proprietorships, there is no convenient mechanism for channeling equity capital into farm firms. Most of the equity capital that has entered agriculture has entered in the form of land purchase which is then leased to farm firms.

- Even if an investment mechanism were developed, it is doubted that non-farm investors would be interested in minority equity interests in closely held farm firms without an assurance of rights to participate in management or assured income or both. Involvement by off-farm investors in management would be anathema to many farmers and the typical cash flow of farm firms might not permit a current return commensurate with alternative investment opportunities. In light of the capital needs of agriculture, it does seem vital that the agricultural sector remain linked to the major sources of capital. Moreover, an argument can be made that barriers to capital flow should be examined with care to see that capital shortages do not develop in agriculture. However, the most obvious barriers--limitations on corporate[44] and non-resident alien[45] ownership of farmland--involve equity capital rather than debt capital flows. Debt capital is relatively free to flow into agriculture in keeping with relative rates of returns and relative lending risks.

From the standpoint of tax policy, the prudent course would seem to be to seek neutrality in terms of impact on debt and equity capital flows. The family farm system of American agriculture is based upon all or most of the equity capital of the farm firm being provided by the farm family. Certainly any change in the family farm structure should come in an evolutionary manner as individual farmers consider the trade-offs between decision making independence and the spreading of risk rather than being induced by tax motivated incentives.

V.

One of the more significant Congressional actions of the past decade with respect to tax policy was the substantial easing of the federal estate tax burden in the 1976 and 1981 legislation. Agriculture has a strong interest in tax policies designed to curb the concentration of wealth.

In reducing the federal estate tax liability on estates, the Congress seems to have been motivated in part by concerns that family farms and small businesses were threatened by the levels of federal estate tax then in effect. The Congress appears to have assumed that the way to assure survival of the family farm as a concept was to work to assure the survival of family farms as economic entities.[46] Legislation was enacted--(1) reducing the federal estate tax burden on small estates,[47] (2) creating a procedure for valuing land used in a farm or other business below fair market value for federal estate tax purposes under what is known as special use valuation[48] and (3) enacting a more attractive option for installment payment of federal estate tax if a business was involved.[49] These actions were apparently made under the assumption that the family farm as a production entity should continue as an economic entity through time. Both pre-death and post-death requirements for special use valuation of land and installment payment of federal estate tax assume the existence of a business. Yet most family farm businesses do not survive the generation of their founding.[50] Even though the land may remain within the family, the farm business rarely continues beyond the life span of the parents. An increasing number of the larger farm and ranch businesses (but still only a few in total numbers) are pursuing an objective of continuation of the farm business into the next generation. Not unexpectedly, Congressional action to ease the federal estate tax burden is of greatest value to the largest farm and ranch operations and to non-farm investors in farmland.

Especially in light of current budgetary pressures, the Congress may want to reconsider not only the reduction of the top federal estate and gift tax rates from 70 percent to 50 percent but also the scheduled increase in the federal estate and gift tax unified credit. The unified credit is at $96,300 for 1984 (which is equivalent to a deduction of $325,000). The credit is slated to rise to $192,800 in 1987 (which is equivalent to a deduction of $600,000). Again, the relevant question becomes the macro implications for what appears to taxpayers to be a highly desirable micro tax break.

Repeal of the present generation skipping tax is clearly defensible on the grounds of complexity and problems in administration of the tax. However, repeal would reopen a major planning loophole for channeling large amounts of wealth from generation to generation with no tax burden on "skipped" generations. The federal estate tax was apparently intended by the United States Congress to accomplish multiple objectives: to generate revenue, to redistribute wealth and to influence the structure of the economy. The question is whether the recent changes are consistent with those objectives.

A family owned and controlled agriculture is promoted by--(1) a death tax structure that is as demanding of farm and ranch estates as those of any other sector, such that investment is not unduly attracted from non-farm investors and (2) by a death tax structure that may lead to the break up of large tracts of land. Without a doubt, entry into agriculture is inhibited if land is tied up within families for extended periods.

VI.

In conclusion, it seems not unreasonable for tax policy either to be neutral with respect to structure and to economic advantage or disadvantage by size and type of firm or to be consistent with other policies in terms of effect on structure and on profitability by size of firm. At a minimum, tax policy should--(1) not decrease the cost of production for larger over smaller firms, (2) not induce investment in agriculture from nonfarm investors to a greater degree than in other sectors, that is to strive for neutrality in terms of effect on capital flows and (3) not encourage concentration of land ownership in the hands of a "landed gentry." Even more importantly, tax policy should be expected to contribute revenue sufficient to support politically acceptable program levels such that the economy does not incur significant budgetary deficits in times of economic recovery.

FOOTNOTES

[1] For a review of the data on farm and ranch size by method of organization, see 6 Harl, Agricultural Law § 51.03[2][c] (1983).

[2] *Ibid.*

[3] See 5 Harl, *supra* note 1, § 41.02.

[4] T. A. Miller, G. E. Rodewald & R. G. McElroy, "Economies of Size in U.S. Field Crop Farming," Agric. Econ. Rep't 472, July, 1981, p. 20 (Table 6):

	Size of most efficient farm		Size of farm to provide 90-perent resource return rate		
	Gross income	Crop land	Gross income	Crop land	Income as percentage of large farm
	$1,000	Acres	$1,000	Acres	Percent
Corn Belt	145	639	60	299	41
Pacific Northwest	156	1,887	54	449	35
Southeast	130	399	55	143	42
Southern Plains	100	1,488	28	399	28
Texas High Plains	175	974	58	395	33
Northern Plains	105	1,476	17	232	16
Mississippi Delta	122	1,237	47	335	39
Average, seven regions	133	1,157	46	322	33

See J. P. Madden & E. J. Partenheimer, "Evidence of Economies and Diseconomies of Farm Size," in *Size, Structure and Future of Farms*, pp. 91-107, A. G. Ball & E. O. Heady, eds., Iowa State University Press, 1972. See also "Economies of Size Studies," Proceedings of Conference, Purdue University, West Lafayette, Indiana, Aug. 3-4, 1983, Center for Agricultural and Rural Development, Iowa State University, Ames, Iowa.

[5] See I.R.C. § 6166(g)(1)(A).

[6] *Ibid.*

[7] See D. Doye & M. Boehlje, "A Flat Rate Tax: What It Means for Farmers and Agriculture," Dep't of Economics, Iowa State University, March, 1984 (unpublished manuscript).

[8] See "An Analysis of the President's Budgetary Proposals for Fiscal Year 1985," Cong. Budget Office, Feb., 1984, p. 1:

> "The Congressional Budget Office...estimates that the budget deficit under Administration policies would grow from $186 billion in 1984 to $192 billion in 1985 and $248 billion in 1989....
>
> "CBO projects that, under current spending and taxing policies, the federal budget deficit would grow from $189 billion in 1984 to $197 billion in 1985 and $308 billion by 1989...."

[9] See N. Harl, "A Financial Revolution in Agriculture," 60 N.D. L.Rev. ___ (1984).

[10] See "Treasury and Federal Reserve Foreign Exchange Operations: Interim Report," 65 Fed. Res. Bull. 951, 953-54 (1979).

[11] See E. Melichar, "A Financial Perspective on Agriculture," 70 Fed. Res. Bull. 1 (1984); Iowa Farm Finance Survey, Iowa Crop and Livestock Reporting Service (1984) (debt as a percent of farm assets at 29.5 percent average for Iowa but about one-third of the farmers are essentially debt free); Agriculture Finance: Outlook and Situation, U.S. Dep't of Agriculture, Econ. Res. Serv., p. 10 (1983) (total farm debt stood at $215 billion in 1983, up from $54 billion in 1971 and $91 billion in 1976).

[12] Agricultural Finance: Outlook and Situation, U.S. Dep't of Agriculture, Econ. Res. Serv., p. 10 (1983).

[13] *Ibid.*

[14] *Ibid.*

[15] M. Boehlje, "The 1980's: New Rules Require New Management Stategies," Dep't of Economics, Iowa State University, Fig. 7 (1984).

[16] See notes 12-15 supra.

[17] See generally N. Harl, Legal and Tax Guide for Agricultural Lenders ch. 1 (1984).

[18] Pub. L. 97-34, 95th Stat. 172 (1981).

[19] See D. Yepsen, "Jepsen Backs Taking Step Leading to Gold Standard," Des Moines Register, September 29, 1981, pp. 1A, 4A:

> "...[T]here is 'no hope of covering the deficit' that is being created by the Reagan tax cut.... That cut will come to be viewed 'as the most irresponsible congressional action of this century.' He added, 'and I pick these words intentionally.'"

[20] See cases cited in 4 Harl, Agricultural Law § 32.03[b] (1984).

[21] Revenue Act of 1978, adding I.R.C. § 48(a)(1)(D).

[22] Ibid.

[23] See B. Fleming, Opinion Page, 28 Nat'l Hog Farmer, No. 9, Sept. 15, 1983, p. 34; B. Gnatzig, "Tax Credits: Are They Driving Expansion?" 28 Nat'l Hog Farmer, No. 8, Aug. 15, 1983, pp. 8-10.

[24] I.R.C. § 182

[25] I.R.C. § 182(a).

[26] See N. Harl, "The Future of Government Regulation of Agriculture: Implications of Tax Policy for Agriculture," 3 N. Ill. L. Rev. 279, 282-286 (1983).

[27] I.R.C. § 77(a).

[28] The election available to farmers on the cash method of accounting to report inventory under installment payment rules is another unique opportunity open to farmers. See I.R.C. § 453(b)(2)(B) (as a practical

matter, only farmers on the cash method of accounting are not required to report dispositions of personal property which are "required to be included in the inventory of the taxpayer").

[29] Tax Reform Act of 1969, Pub. L. 91-172, Sec. 212 (a)(2), 83 Stat. 571 (1969).

[30] I.R.C. § 1231(b)(3)(A), amended by Pub. L. 91-172, Sec. 212(b), 83 Stat. 506 (1969).

[31] I.R.C. § 1251 added by Pub. L. 91-172, Sec. 211(a), 83 Stat. 566 (1969). No additions have been made to excess deductions accounts since 1975. I.R.C. § 1251(b)(2)(E), added by Pub. L. 94-455, Sec. 206(a), 90 Stat. 1535 (1976).

[32] See I.R.C. § 464, added by Tax Reform Act of 1976, Pub. L. 94-455, Sec. 207(a)(1), 90 Stat. 1536 (1976).

[33] I.R.C. § 704(d), added by Pub. L. 94-455, Sec. 213(e), 90 Stat. 1548 (1976).

[34] I.R.C. § 465(c)(1)(B), added by Pub. L. 95-600, Sec. 201, 92 Stat. 2814 (1978).

[35] See I.R.C. § 464.

[36] H.R. 2163, 98th Cong., 2d Sess. (1984), amending I.R.C. § 464 by adding a new subsection (f).

[37] Legislation was enacted in 1976 limiting farm and ranch corporations with more than $1,000,000 of gross receipts to accrual accounting except for family corporations and S corporations. I.R.C. § 447, added by Pub. L. 94-455, Sec. 207(c), 90 Stat. 1538 (1976), amended by Pub. L. 95-600, Sec. 351(a), 92 Stat. 2846 (1978). See 7 Harl, supra note 1, § 54.05[1].

[38] I.R.C. § 168(c). See 4 Harl, Agricultural Law § 29.05[2][c][iv] (1983)

[39] I.R.C. § 168(c)(2)(B). See 4 Harl, *supra* note 38, § 29.05[2][c][ii][B].

[40] For depreciable property placed in service after 1982, taxpayers must either--(1) reduce the income tax basis for property by 50 percent of the regular investment tax credit and energy credit allowed and by 100 percent of the rehabilitation credit or (2) reduce the regular investment tax credit by two percentage points (for example from ten percent to eight percent) in lieu of reducing the income tax basis by 50 percent of the regular investment tax credit but with reduction by one-half of the energy credit and by 100 percent of the rehabilitation expenditure investment tax credit. I.R.C. § 48(q).

[41] See 4 Harl, *supra* note 38, § 29.05[1][a].

[42] See I.R.C. § 1250

[43] See 4 Harl, *supra* note 38, § 31.03[2][b], for a discussion of the application of Section 1245 recapture rules (gain is recaptured as ordinary income to the extent of depreciation claimed since 1961, 1969 for livestock) to Section 1250 assets if 15-year accelerated cost recovery is claimed)

[44] See 6 Harl, *supra* note 38, § 51.04 (state law restrictions on farm and ranch corporations in North Dakota, Okalahoma, Minnesota, South Dakota, Missouri, Iowa, Nebraska, Wisconsin, Texas, West Virginia and South Carolina).

[45] See 13 Harl, *supra* note 38, § 123.02 (state restrictions on foreign ownership of agricultural land).

[46] See H. Rep. 94-1380, 94th Cong., 2d Sess. 22.

[47] The major statutory change made to ease the federal estate tax burden on "small" estates was to provide for annual increases in the level of the unified estate and gift tax credit through 1987. See I.R.C. §§ 2010(b), 2505(b).

[48] See I.R.C. § 2032A.

[49] I.R.C. § 6166.

[50] See 5 N. Harl, *supra* note 38, §§ 41.02, 41.07[3].

Senator Jepsen. I thank you, Mr. Harl.

Now, Byron Ross, from Iowa City, IA, and he's well-known to all Iowans as a civil servant and sanguine sage. Welcome, and you may proceed.

STATEMENT OF BYRON ROSS, GENERAL SERVICE PARTNER, McGLADREY HENDRICKSON & PULLEN, IOWA CITY, IA

Mr. Ross. Thank you for letting me participate.

As you said, my name is Byron Ross. I'm with a small national CPA firm, McGladrey Hendrickson & Pullen, as a general service partner located in Iowa City, IA. My remarks will be as a generalist, not as a specialist. I have been in public accounting for 31 years and when I started our tax service in our office was two volumes. Now we have four full-time tax specialists that do nothing but review and try to work out what's best for our clients. When I have a problem, I go to someone like them and they go to Neil Harl's seminars.

I think that the tax shelter bit in agriculture has been way overplayed. Agriculture is a very capital intensive industry and the years that Senator Abdnor referred to, 1976, lands increasing in value, grain prices were good, everything seemed rosy. If you would make a study now as to what has happened, land prices have dropped more than what the media says. We have farmers who, as Mr. Harl said, you could borrow money on increased equity, expand your operation and cover up a lot of sins. We have farmers now who have farmed for many, many years where 2 or 3 years ago the land was worth $1,000 or $1,500 an acre. The banks are calling their loans and there are no buyers for the land. It is indicated that a lot of the land is sold to outsiders. In our area, the biggest buyer is the neighbor next door and a lot of times it's someone with a son or two or three sons who want to farm and they will bid the price up, especially if they have the present farm paid for, and then agriculture has been a high tech industry. They've done lots to improve production.

Comments are made about the number of acres of land being concentrated in one family, but if you have three or four sons that want to farm it's hard to do that on 500 acres.

Very few of the farmers that we did work for this year in Iowa City paid income taxes other than Social Security. I think it will be less this year.

In my statement to the committee, I made comments about Social Security. It is becoming a rather large tax. We do year-end pretax planning such as paying wives' salaries, children's salaries, and do a lot of things to try to cut that, but it's kind of hard for an individual who maybe has $9.000 income to pay a little less than $900 Social Security when $9,000 isn't much more than what he can make a living on.

In the estate tax area, I do have a concern that Mr. Harl that too much land will get in the hands of too few. The 15-year deferral of family farms has been very helpful. The prepayment penalties cause some difficulties. I'm not sure that that whole structure shouldn't be looked at and maybe if it is really a family farm and billed as a prepayment penalty, a lot of planning is based on taxes and not on good common sense.

When you refer to tax shelters, there was an article recently in one of our tax services on the number of cases that the IRS has going and they named the five major areas, and it did not include agriculture.

Our office gets quite a few tax shelter bulletins every week because we have quite a few clients that do invest in so-called tax shelters. The biggest one in our area anyway is investing in real estate and with the ACRS rules on residential property, a 50-percent tax bracket taxpayer can construct a pay-in, so that he has a cash gain every year from day one and at the end of the sixth year, if he invests his money in tax exempts, he can walk away from it and end up money ahead. I'm not sure that's really what ACRS was supposed to accomplish.

That's the end of my comments, Senator.

[The prepared statement of Mr. Ross, together with attachments, follows:]

PREPARED STATEMENT OF BYRON ROSS

My name is Byron Ross. I'm with the CPA firm of McGladrey Hendrickson & Pullen as a general service partner located in Iowa City, Iowa. My comments will be those of a generalist not a specialist. We do tax returns for farmers, financial statements and tax planning for other agri-related businesses such as grain elevators, farm implement dealers, fertilizer dealers, etc.. In a letter to me, Senator Jepsen indicated that the hearing would focus on four topics: 1) review of recent tax law changes; 2) a review of the economic consequences of taxation; 3) a discussion of tax shelters and agriculture and 4) a review of alternative tax structures.

Senator Jepsen's letter indicated that in 1981, one million individuals reported farm net profits of $7.8 billion while another 1.7 million individuals reported farm net losses of $16.3 billion. This ratio probably has not improved in the last two years. Many times the difference between the taxpayers with losses and those with income is related more to the amount of interest paid rather than "shelter" techniques. Tax rates, depreciation methods, investment tax credits, etc. do not help this large group of farmers who show losses. Their problem is not of one of paying income taxes, it is one of survival. In fact, if a farmer has to liquidate a substantional part of his operation, he probably will pay a large amount of tax because of the alternative minimum tax rates that relate to capital gains and because of investment tax credit recapture.

The new ACRS depreciation rates are fine for those who can show a profit. I would like you to consider allowing the farmer, or the small agri-related business to defer deducting some of their depreciation until later years. I realize there would have to be a limit on this to keep it from being abused. But as the law now stands, many farmers lose exemptions on their tax returns because of depreciation policies that were adopted in prior years. Corporations can simpl carry these items over. Individual farmers can't, to the extent that the exemptions are lost.

The FICA tax is now becoming expensive insurance for the average tax paying farmer. To avoid this, we have suggested to our farm clients that they do things that do not necessarily make a lot of sense, like paying the wife a salary, which is not subject to FICA taxes. If there is farm corporation, we suggest that they take more out in rent and less in salary and other similiar items solely to cut the FICA tax burden.

Income tax rates usually are not a problem, even with those farmers who have large incomes. This can generally be taken care of by incorporating and utilizing the lower corporate income tax rates on the first $100,000 of income. The incorporated farmer can, in some instances, deduct practically all of his living expenses on the corporate income tax returns. The individual without enough income to incorporate may not enjoy these benefits. I'm not suggesting that you take these benefits away from the large profitable corporate farmer, but just want to point out some inequities that maybe should be addressed in the future.

At Neil Harl's farm seminar in 1977 attended by one of my associates, there were a number of bankers who thought that problems with farmers at that time were caused in part by buying too much expensive equipment. They were becoming shy about lending for large tractors, etc.- particularly if the farmer had purchased several other large items recently. Perhaps the ITC had some influence in putting some farmers in the corner they are now in. Times have changed. It takes much more than investment tax credit to influence an investment in machinery now. There are quite a few farmers with substantial amounts of investment tax credit carryover.

The new law reducing the basis of depreciation by 1/2 of the investment tax credit taken has lessened the impact of ITC on income tax returns. An attempt was made to allow "sales" of unused investment tax credit. Like a lot of other things, it became abused. It would appear that in specific industries, and with limits that would discourage abuse by tax shelter salesmen, the investment tax credit could be used by the lending institutions, the manufacturer, or the agri-business that sold the farmer the equipment. This is possible now through leasing with a $100,000 limit, but is not widely utilized.

We seem to continually have problems with the over-production of feed grains and also with the balance of trade. Perhaps the tax structure could be used to help solve these problems. With proper tax incentives, more grain could be used in the products we manufacture, such as gasohol, plastics and similiar items. This might help reduce the imbalance in the balance of trade, and to reduce the large surplus that seems to continually plague us.

Senator Jepsen indicated in his letter that the economic consequences of taxation may create distortions which alter the decisions of producers and consumers in the marketplace. For example, he asked "has the tax code: Hastened the substitution of capital for labor? Encouraged the expansion of farm operations? Raised land prices artifically? Altered farming techniques and management techniques? "Subsidized" large farmers because tax deductions are more valuable to higher income earners?"

My personal feeling is that low farm prices have caused the substitution of capital for labor, encouraged the expansion of farm operations and altered farming and farm management techniques. If it takes 3 bushels of corn to buy what it took 1 bushel to buy a few years ago, the only way to get those 3 bushels is to produce three times as much on the same piece of ground or farm more ground.

Children planning to stay home and become part of the family farm operation probably have caused a substantial portion of the increase in the size of farm operations and in land prices. In our area, anyway, is it not the tax shelter advocates, those with substantial tax problems, or the sophisticated investor who are investing in land. Competition for land as it comes for sale is usually between neighbors. Large farmers who have a large debt load are not as profitable or more profitable than the small farmer who has everything paid for. Again, high interest rates and trying to keep the family farm, by whatever means, have probably caused more of our problems than income taxes.

It appears that a large increase in land prices also was caused by the increase in the price of farm products a few years ago because of the large exports to the Soviet Union. These increases stopped because of government foreign policies, changes in foreign exchange rates, U.S. farm policies and foreign subsidies. The government had good reasons for doing this but it is hard to explain to some farmer who is about to go under.

I've included in my material articles from the Des Moines Register which show how the sluggish farm economy has impacted agri-related businesses, which, in Iowa, includes the banks. In one of these articles, a farm implement dealer states that his tractor and combine inventories are about 111% of 12 months' sales. Here is an industry that makes, at the most, 10% gross profit.

But it pays 14% interest and has more than 13 months' sales in inventory. I personally know of implement dealers who have sold equipment at cost or below cost just to get rid of their interest load. The problem with this kind of marketing is it delays profitable sales in the future. Our office does work for quite a few implement dealers that are having trouble breaking even or are making only a small profit. Some will not survive unless something happens to brighten their future. I had hoped there would be some long term financing available through the Small Business Administration because of losses attributable to PIK and the drought. However, these loans are almost impossible to get. Make no mistake. The impact of these policies and events are massive and effect far more than just the farmers themselves. For example, John Deere, which employed almost 30,000 people in Iowa in the late 1970's, has cut total employment in the state to 19,000.

The farm section of the March 18, 1984 Des Moines Sunday Register carried this headline: "Farm Woes Bring Another Tough Year to State's Banks". The newspaper's survey showed that 900 Iowa banks lost money in 1983, up from 5 in 1982. According to the study, as recently as 1981, none of the banks in the survey had lost money. The article indicated that farm loans were the biggest problem with most of the banks that lost money in 1983, and not surprisingly, banks in the south-central part of the state had more than their share of woes. According to the study, First National Bank, Oelwein, Iowa, had $2,939,000 as a loan loss provision in 1983 compared to $74,000 in 1982. This a $50 million bank with loans less than ½ of their deposits. To quote Thomas Huston, our State Superintendent of Banking, "There are a lot of people in this state who are terminally ill financially." He also stated that our banks are not in financial trouble because of the high capital accounts that have been maintained in the past.

The April 1st issue of the Des Moines Sunday Register stated that the charge-offs for the Production Credit Associations had increased in 1983 by 103%, and that acquired property had increased by 144%. The same article also indicated that the charge-offs by the Federal Land Banks had increased 282%, and that the value of the property acquired had increased by 244%. It appears to me that a lot of the agricultural problems are not related to income tax rates.

It is my opinion that the farm tax shelter is being overplayed. I get literature almost daily from firms that specialize in tax shelters, and I can not think of one time in the last two years of receiving one related to farm land. Perhaps investors have discovered that farm shelters are not good shelters, even if the economy isn't causing the losses. They do not change income from ordinary income to capital gains. Deferral of tax due to a farm tax shelter is very short. Prepaid expenses must be paid in cash each year just to maintain the first deferral. If the prepayment is not made again at the end of the next year, income is bunched. Prepayment with cash basis accounting is about the only shelter for the livestock farmer. Grain can be stored and sold at a later date, but if this is to continue to defer income for very long, the storage and interest costs become burdensome. PIK caused some farmers with stored grain to bunch income this year. At least one legitimate farmer I know of got hit in reverse by his shelter. If he had recognized his gain annually, ITC would have wiped out his tax. As it was, he has ITC to spare but didn't get to use it because the alternative minimum tax took away the benefits. Without bunching, his income would have been well below the $40,000 adjusted gross income each year.

Investment tax credit and accelerated depreciation are a shelter of sorts. There are shelters in any capital intensive industry. But investors would be better to find an industry with some profits to invest in.

One small item I would like to mention is that farmers with losses frequently do not get the earned income credit because 1) losses are greater than wages and there is no earned income credit for losses and 2) the optional self-employment tax when added to the wages is too large to get a credit. Therefore, farmers with cash and economic losses do not qualify for the earned income credit.

Farmers on the cash basis of accounting for income tax purposes can elect the accrual method, but because of the record keeping burdens, many do not do so. The cash basis accounting method causes tax problems because of the bunching of income causes the farmer to use taxes instead of the economics of the situation in marketing his product. It is doubtful if any revisions in the tax code can do much about this. I point it out for informational purposes only.

Small businesses many times qualify for Industrial Revenue Bonds. At the present time in our area such bonds carry an interest rate approximately 20-30% below normal lending rates. It is almost impossible for our farmers to avail themselves of this low cost financing. This, or other types of low interest rate loans, may be a way to help alleviate the substantial economic problems farmers face due to high interest rates. Our firm has helped grain elevator clients establish DISC corporations that are involved in grain exports. This has not been a big item, but it has helped some of them defer some income taxes. There is an indication now that Congress intends to eliminate certain DISC corporations. Like many things that are done in the tax area, because a law is abused in one place, it is changed to cover all areas, and the innocent get hurt as well as the guilty.

Special use valuation and the 15 year deferral for estate taxes has helped many farmers. The increase in the tax free portion of estates has also been helpful. The law and regulations need to be simplified. The recapture period should be eliminated or shortened. The by-product to the farm couple has been to substantially reduce the amount of life insurance required to fund estate taxes. Previous to this change, they did not have the money to buy the insurance, but had no alternative because of the future possible estate tax burden.

There has been an abuse during recent years of interest free loans to children. These funds are then invested in high income-producing securities. Under the new proposed law, this abuse will be corrected. Then again, the correction in one area will cause an unrealistic situation in another. For example, it is very difficult for a young person to get started in farming now. If his parents want to loan him money, interest free, it would appear that under the new law they would have to pay taxes on the imputed interest on loans over $10,000. And that interest is imputed at a rate greater than that earned on government securities. Already there is a provision in the tax laws whereby parents wanting to sell their farmland to their children on a long-term contract have to pay 7% interest up to $500,000 and 9% on all over that. To avoid this problem, and yet transfer the real estate with a minimum of tax costs to those who are doing the farming in the family, we advise farm clients to form partnerships, whereby a portion of it can be gifted each year, or to set up corporations whereby the same thing can happen. It seems odd that our farm friends have to go through this extra cost to accomplish something that makes economic sense. This is a good example of some of the paperwork and fees for lawyers and accountants that have been caused by changes in the tax laws that were meant to correct an area of abuse and was not zeroed in on that specific area.

A small item but one that has caused many problems this year, is the requirement for filing form 1099. If you read the law literally, a 1099 should be filed for a service station that performed more than $600 labor on a vehicle during the year. If the service station is incorporated, this form does not need to be filed. We have doctors receiving 1099's all over the place. Our firm receives many 1099's. There is no way the IRS can use these items without examining our records in detail to determine whether or not the items were recorded. It reminds me of a few years ago when businesses were required quarterly to submit to the government the employee's name, social security number and earnings with their payroll tax returns. I understand that this information was never used and is therefore no longer required.

The last item I would like to discuss is alternative tax structures. A flat tax is probably too idealistic to work. I doubt people want to give up the deductions for charity, interest on buying their homes, property taxes, and similar type items. We almost have a flat tax now if you add Social Security tax, federal income tax, and state income tax together and compare the total paid by someone with $100,000 of taxable income against someone with $20,000 taxable income. The difference is relatively small. The FICA tax has been a big contributor toward getting us to a flat tax. A flat tax would hurt farmers, but not as much as other low income taxpayers.

The value-added tax would probably hurt farmers. The public reacts quickly to food price increases, and usually blames the farmer. But much of the cost of food is related to processing and distribution costs. The value-added tax could possibly increase the price of food enough to cause problems. One thing that would possibly help the farmers most is simplicity in the tax law as it pertains to them. The farmer, as a class, has one of the most complicated returns (except for maybe oil people). The farmer with losses has an even more complicated return since the net operating loss rules are quite complicated. The income tax preparation fees are higher than those of most other taxpayers (assuming information is put together in an equal fashion) and much higher than those in similar tax brackets.

In conclusion I'm asking that whatever is done in the tax area, please try not to make it more complicated for our farmers and small ag-related businesses. They already have enough problems.

Sluggish farm equipment sales dim hopes for an '84 industry recovery

By GENE ERB

Register Business Writer

The Long Green Line" used to be a point of pride for Deere dealers, one that would turn red-faced competitors green with envy.

But today, dealers like Ron Brooks in Boone say those long lines of tractors and combines are more cause for concern than pride.

While company officials and independent analysts say the farm equipment industry bottomed out late last year and should show at least a 10 percent sales increase this year, the dealers — for Deere & Co. and other brands — have seen few signs of improvement. Besides, they add, they've heard the optimistic tales before. Company officials and industry analysts have been predicting a turnaround for more than two years. Why shouldn't they be skeptical?

"I get an opportunity to talk to a lot of dealers, and I don't think business has ever been in the state it is today," said Brooks. "We've never seen the likes of this."

Brooks says his tractor and combine inventory are "about 111 percent of 12-month sales," much too high for a business in which the ideal level is around 25 percent for combines and 35 percent for tractors.

He added, "Our sales, quite honestly, are a bit better from a year ago, but we're not making any money."

The problem, he and other dealers said, is the tremendous glut of inventory in the field — about 92 percent of annual sales in tractors and more than a year's supply of combines at the end of 1983. That, along with fierce competition from farm sales where machinery is being auctioned off at bargain prices, has depressed retail prices to levels at or below most dealers' break-even point.

Richard Craff, sales manager of Tri-County Auction, said his company has sold about $1 million worth of farm machinery in the last six weeks, "and we operate in just a 70-mile radius of Dubuque. That's got to take a big chunk out of the dealers."

Asked how much business has increased, he said he's been too busy to make a comparison. "The sales have been coming in so quickly, it's a large increase, probably close to 80 percent over last year," he said.

Farmers are seeking out good, used equipment because they can't afford new machines, he said, noting that he recently sold a 1981 Deere combine in "top condition" for $44,000, about half what a new one would have cost.

Meanwhile, most new equipment dealers "are under such extreme pressure from inventories, they have to sell at cost," said Brooks.

Other dealers interviewed last week agreed, saying even if they have their inventories in line, they have to respond to price pressures created by the industry glut.

The equipment logjam is having a depressing effect on employment, too.

Deere, which employed almost 30,000 people in Iowa in the late 1970s, has cut total employment in the state to 19,000. The Moline, Ill.-based company has about 6,800 workers at Iowa plants on layoff. And analysts say Deere and many other companies will be slow to recall workers, even if sales pick up, because they need to trim inventories.

"We just don't make guesses about recalls," said Deere spokesman Rey Brune. "It's too hard

EQUIPMENT

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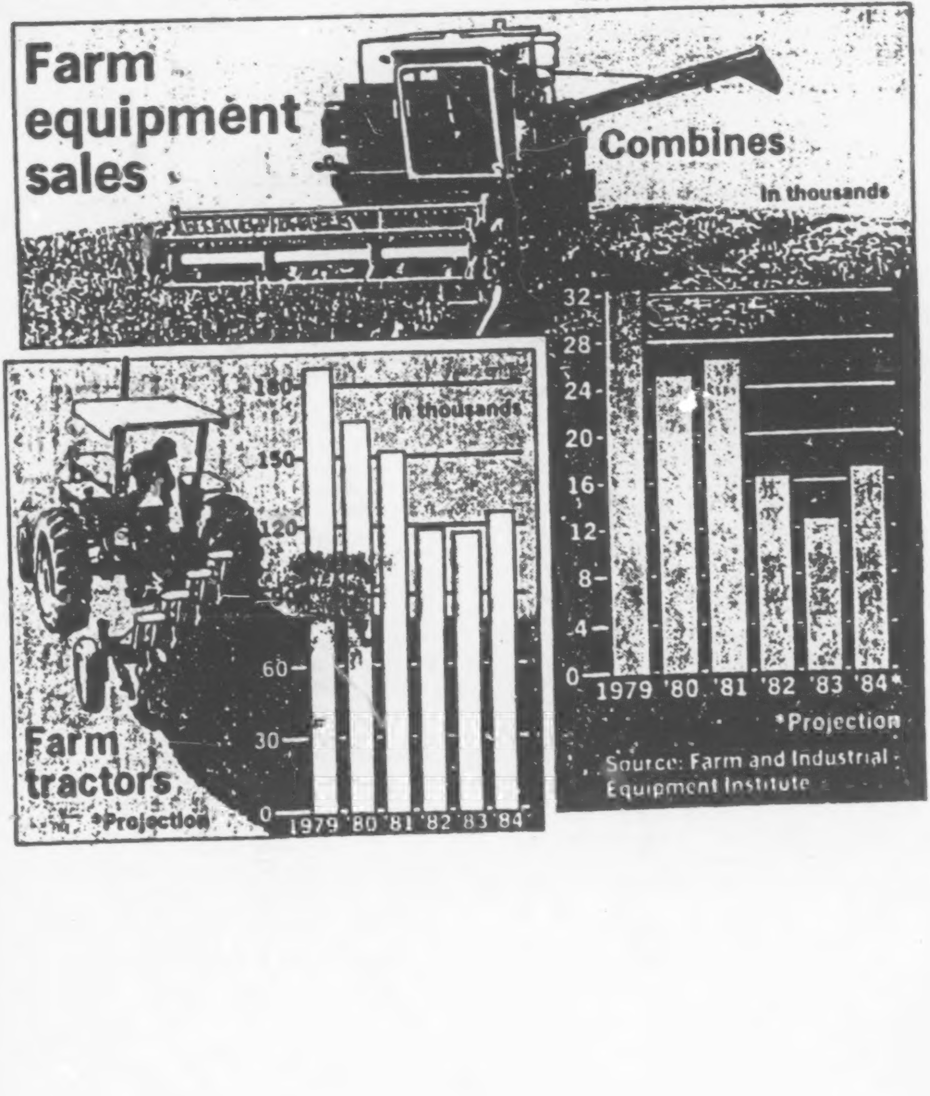

Source: Farm and Industrial Equipment Institute

Huge Deere inventories depress entire equipment industry

EQUIPMENT...
Continued from Page One

on the people who are laid off, and we really have no way of knowing."

Officials of White Farm Equipment Co., which manufactures tractors in Charles City, could not be reached for sales or employment projections. However, a Charles City Chamber of Commerce official said about 450 people are working at the plant. About 1,500 workers were employed there before poor economic conditions and decreased demand for farm equipment forced massive layoffs.

Everett Ihle, owner of the International Harvester dealership in Nevada, said he's sold some equipment this year, but sales remain depressed and "what we sell is at distressed prices. You just try to cut inventory because you're paying $400 to $500 a month interest on a tractor. So as far as I'm concerned, the farm economy is pretty damn poor."

Dick Gansemer, an official with the Massey-Ferguson and Ford dealer in Dubeque, said he's got his inventory in good shape — about 25 percent of annual sales in Massey equipment and 35 percent of annual sales in Ford equipment — but he's still having to cut prices because of market conditions.

"Business is very, very slow. Companies are looking at a 10 percent increase over last year, but farmers are still so cautious because of the troubles they've had and the state of the farm economy today," he said.

"It seems like there's buying interest up to about $7,000, for planters and tillage equipment. After that, farmers are very, very cautious, and banks are running scared. They're not making loans for large pieces of equipment. Some are giving farmers just enough money to get a crop. Others aren't even giving that," Gansemer added.

He said his dealership started cutting back inventories two years ago, and most other Massey dealers did, too.

"The majority of Massey dealers have their inventories in line. I think Massey dealers, and International dealers, too, began whittling down their inventories because of the financial difficulties of their parent companies. They were just afraid to carry too much inventory," he said.

But most Deere dealers didn't cut back, and that's hurt everyone in the business because they're "really trying to unload inventory," he said.

"When a guy beats you by $1,000, and you know he's not making anything doing it, you know he's unloading. He may be willing to unload at $1,000 below cost to avoid another month's $700 interest payment. I've got a couple pieces like that myself," said Gansemer.

Brooks, the Deere dealer in Boone, said many Deere dealers have run into inventory problems because Deere & Co. "didn't think the recession would last as long as it has. We weren't forced to take machinery. But it was built, and dealers were misled into taking more than they could sell."

Brooks said Deere officials have done "everything they think they can afford to do" to help hard-pressed dealers through their crises, "although Deere is profitable and a lot of dealers aren't, so there might be a bone of contention about that. I think they feel they've done what they could."

However, Bill Barker, the Deere dealer in Lenox, said many Deere dealers are about to collapse from the weight of their inventories, and "If John Deere doesn't do something, a lot of us are going out. The market isn't going to turn around that fast. The attitude for a lot of us is becoming, 'Why stay in business another year just to lose money?'

"Somebody has to rattle their cage because they're about to force a bunch of us down the tubes . . . John Deere's a great company with a great product. But to survive, we're going need more help."

Several Deere dealers agreed with Barker, saying Deere should bear more of the inventory burden because the company caused the problem by building too much machinery.

But many others, including John Conway, the Deere dealer in Jewell, said Deere has been more than fair with its dealers. The ones who are grumbling, he said, are the ones who have made mistakes and are looking for someone else to blame.

"When you're in trouble, you'll do anything to save face," said Conway. "When your back's against the wall, you'll blame anybody . . . Business has been bad, but you can't blame Deere for that."

Meanwhile, analysts are sticking to their prediction of an improvement in sales this year.

George Dahlman, an analyst with Piper Jaffray Inc. in Minneapolis, Minn., said he wouldn't be surprised to see a sales increase of 12 to 15 percent: "If we can do that this year, I'd be ecstatic. That would be great for 1984. But we're coming off such a lousy base, it's going to take two or more years of that to say, 'Happy days are here again.' "

He said he expects steady improvement through 1986, "and then I think we might have a problem again" because of the cyclical nature of the industry and the uncertain future for farm exports.

Value Line Inc., a New York investment firm, said a projected increase in the value of farm exports this year, along with an estimated 13 percent increase in farmers' gross income, should give farmers the ability to buy new equipment. And an increase in planted acres should give farmers who have put off purchases for the last few years strong incentive to replace their aging equipment.

"Equipment wears out when you use it, so we should start hitting the replacement cycle here soon," agreed Milwaukee analyst John Mirek.

However, Value Line said, "There's still too much farm machinery in dealers' hands. So some of the improved demand . . . will go toward reducing dealer stocks, and won't flow through to the manufacturers.

"Last year, the manufacturers put considerable effort into reducing their stocks by cutting back production. But demand fell too. So though companies were able to trim their own inventories, they were generally less successful at the dealer level.

"This was particularly troublesome for Deere . . . This year, in order to better balance its dealer inventories, Deere plans to produce less equipment than will be sold at retail. Other companies will generally follow suit, though their dealer inventory problems are apparently less acute."

Value Line added that excess stocks at many dealers "will continue to pressure company margins, since considerable discounting, extended interest waivers, and other promotional deals are likely to be needed to generate sales. And these corporations back their dealers financially."

Value Line offered the following outlooks for individual companies:

- Deere & Co., which saw annual sales drop to $3.97 billion last year from $5.47 billion in 1980, should see an 18 percent increase in sales to $4.70 billion this year. However, the company plans to increase production by only 14 percent.

"That reflects the company's effort to reduce dealers' inventories, which are very high relative to current sales." At the end of 1979, total debt amounted to $842 million. By the close of fiscal 198[illegible], inventory financing had sent borrowings soaring to $1.93 billion.

Nevertheless, Value Line expects

Deere to show significant earnings improvement, with net income increasing to a projected $170 million from $23 million in 1983. Deere, which saw net income peak at $310.6 million in 1979, earned $251 million in 1981 and $52.9 million in 1982.

• International Harvester, a financially troubled company which hasn't had a profitable year since 1979 and lost $485 million last year, could see a return to profitability this year.

Three debt restructurings and significant cutbacks in operations have improved the company's position, Value Line said. International Harvester "has become a much more efficient company," with a break-even point at about 50 percent of the sales volume needed to break even in 1981.

Value Line said Harvester's finances remain weak, and it "faces tough market share battles from financially stronger competitors."

• Massey-Ferguson, a Canadian-based company which has its North American headquarters in Des Moines, "has become a much leaner company since 1978. Some extraneous businesses were divested, many plants were closed or sold, and employment was cut by more than 55 percent. Those steps have sharply reduced the company's break-even level."

An upturn in demand should permit Massey's operating margins to widen to the best levels since 1977.

However, Value Line added that high financing costs and income taxes probably will restrain reported net profits" this year. And the financially troubled company, which hasn't had a profitable year since 1979, "faces competitors with much greater financial resources."

• Allis-Chalmers is another company with financing problems and a string of losses in recent years. Value Lines believes the company's finances "will continue to erode until the second half of 1984," and the company probably will lose money again this year, although losses will be cut considerably.

However, the firm said, "The moderate recovery in demand we estimate for agricultural equipment should benefit A-C more than most of its competitors. That's because its dealers' inventories are below those of the average, so a retail pickup should flow through to the manufacturer relatively fast."

• Steiger Tractor, a leading manufacturer of four-wheel-drive tractors, should experience "a good earnings recovery."

"The government's ... cutback in land set-aside programs will probably result in a sharp increase in planted acreage. That, coupled with better farmer finances ... should permit at least a partial recovery in demand for tractors. And in contrast to most competitors, Steiger dealers' inventories are in good shape ...

"The company's high-priced, high-quality machines have steadily gained market share. And its market segment is growing, in line with the average size of the North American farm."

Farm woes bring another tough year to state's banks

By WENDELL COCHRAN

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Iowa's banks — reflecting the troubles of the state's drought-stricken, profit-starved farm economy — had another tough year in 1983.

The Des Moines Sunday Register's annual survey of Iowa banking, covering 160 of the state's largest banks, showed that profits at the banks totaled $131.4 million, up about 3.4 percent over 1982, when the banks in the study earned $126.4 million after taxes and securities transactions.

But that number is somewhat misleading: profits at Davenport Bank & Trust Co. soared by $4.9 million in 1983. And profits increased more than $4 million at Norwest Bank of Des Moines. That means that profits at the other 158 banks in the survey were lower on average in 1983 than in 1982.

Nine of the banks in the study lost money in 1983, up from five in 1982. As recently as 1981, none of the banks in the survey had losses.

Farm loans were the biggest problem for most of the banks that lost money in 1983, and not surprisingly, banks in the south-central part of the state had more than their share of woes.

Five of the nine banks that posted red ink — National Bank of Chariton, Hawkeye Bank of Mount Ayr, Iowa State Savings Bank of Creston, Union State Bank of Winterset and Citizens State Bank of Corydon — are located in the southern counties. And the only bank failure in Iowa in 1983 was that of the private Exchange Bank of Bloomfield, also in the south-central part of the state.

The Davis County State Bank of Bloomfield made $260,000 in 1983, compared with $265,000 in 1982; its loan loss provision fell from $366,000 in 1982 to $264,000 in 1983. The closing of the Exchange Bank produced some growth for Davis County State Bank; its deposits increased to $40.1 million from $35 million in 1982, a 17.4 percent gain, while loans actually went down to $18.7 million, compared with $19 million in 1982.

Covered by the survey are the largest bank in each county, the three largest banks in counties that have a town of more than 25,000 population and all banks with more than $50 million in deposits.

The study, which has been conducted for each of the past five years, is based on Dec. 31 condition reports and income statements filed with the Iowa Banking Department and the U.S. Comptroller of the Currency.

In some respects, 1983 wasn't that bad for banks around Iowa. Deposits grew about 8.7 percent last year, while loans at the surveyed banks were up 10.8 percent, the largest loan increase in the past couple of years.

But the key to successful banking isn't the ability to make loans, but rather the ability to collect them.

And many banks around Iowa decided in 1983 that more and more of their loans were likely to not be repaid in full. In 1983, the 160 banks took loan loss provisions totaling $77.2 million, a $15 million increase over 1982. The provision for loan losses is a pre-tax deduction from income that represents management's judgment about the quality of loans. In some instances it does not correspond directly with the loans actually written off as bad debts, but it is a figure banking experts watch closely when looking at a bank's lending performance.

The loan loss provisions are added to the banks' allowance for bad loans. Actual write-

BANKS

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Iowa banking review

Listed are the largest bank in each county, the three largest in counties with cities larger than 25,000 and all banks with more than $50 million in deposits.

		Deposits (in millions)		Loans (in millions)		Assets (in millions)		Net Income		Loan Loss provision	
County	Bank	1983	1982	1983	1982	1983	1982	1983	1982	1983	1982
Adair	United Central Bank, Greenfield	$28.2	$26.4	$13.0	$11.0	$31.2	$29.4	$289,000	$373,000	$228,000	$40,000
Adams	Okey-Vernon First National Bank, Corning	39.7	38.4	12.8	11.4	45.0	41.9	605,000	670,000	42,000	--
Allamakee	Waukon State Bank, Waukon	38.6	37.9	25.1	23.2	42.7	41.9	713,000	646,000	32,000	46,000
Appanoose	Hawkeye Bank & Trust, N.A., Centerville	64.4	60.9	34.9	32.2	69.7	67.2	770,000	627,000	213,000	44,300
	Iowa Trust & Savings, Centerville	63.2	56.3	27.9	27.3	71.3	69.3	606,000	565,000	103,000	200,000
Audubon	Audubon State Bank, Audubon	39.0	37.0	26.2	27.4	43.2	41.2	493,000	595,000	23,000	123,000
Benton	State Bank of Vinton	45.8	42.4	21.4	19.2	50.7	47.8	391,000	279,000	(33,000)	493,000
Black Hawk	National Bank of Waterloo	214.7	186.6	95.3	87.7	266.9	261.7	3,368,000	2,636,000	500,000	250,000
	Waterloo Savings Bank, Waterloo	174.5	129.6	72.1	65.5	173.9	160.5	2,017,000	1,666,000	175,000	100,000
	Peoples Bank & Trust, Waterloo	169.5	148.4	85.4	75.0	193.0	168.4	2,037,000	1,739,000	104,000	214,000
	Cedar Falls Trust & Savings, Cedar Falls	61.5	51.9	36.8	38.3	71.7	62.5	199,000	552,000	915,000	703,000
	Norwest, Cedar Falls	62.1	51.6	33.0	30.1	67.9	57.4	166,000	539,000	741,000	96,000
Boone	Citizens National Bank, Boone	69.9	65.4	37.4	36.5	80.4	76.1	1,077,000	982,000	115,000	66,000
	Boone State Bank, Boone	57.2	51.4	29.4	30.8	66.0	60.9	553,000	504,000	332,000	755,000
Bremer	First National Bank, Waverly	63.2	58.5	42.3	39.4	71.3	66.3	694,000	618,000	290,000	38,000
Buchanan	Farmers State Savings, Independence	57.7	54.6	30.5	32.1	65.0	61.8	408,000	485,000	562,000	590,000
Buena Vista	Citizens First National Bank, Storm Lake	107.9	98.4	53.5	48.8	121.2	114.4	2,018,000	1,445,000	87,000	261,000
Butler	Parkersburg State Bank, Parkersburg	26.3	25.1	13.0	13.1	30.4	28.5	500,000	587,000	53,000	60,000
Calhoun	National Bank of Rockwell City	30.8	26.8	13.4	10.7	34.5	30.7	326,000	410,000	--	--
Carroll	Commercial Savings Bank, Carroll	53.7	49.3	18.2	17.8	61.1	56.1	1,090,000	778,000	39,000	235,000
Cass	Norwest State Bank, Atlantic	81.2	74.0	24.5	26.2	90.0	80.4	898,000	614,000	29,000	21,000
	First Whitney Bank & Trust, Atlantic	53.6	50.3	27.5	26.2	58.9	55.2	764,000	748,000	--	--
Cedar	Liberty Trust & Savings, Durant	42.2	37.8	24.3	22.2	48.4	43.3	764,000	621,000	--	35,000
Cerro Gordo	Norwest Bank, Mason City	144.9	134.0	98.5	88.3	170.2	165.2	1,192,000	1,277,000	899,000	1,651,000
	United Central Bank, Mason City	113.6	110.5	74.7	70.0	132.7	128.1	1,186,000	1,158,000	304,000	218,000
	Clear Lake Bank & Trust, Clear Lake	50.5	44.6	29.3	26.5	56.5	50.6	495,000	409,000	157,000	46,000
Cherokee	Cherokee State Bank	55.1	51.5	19.6	20.4	65.0	62.2	957,000	1,132,000	34,000	--
Chickasaw	First National Bank, New Hampton	41.0	38.1	27.2	24.2	46.3	44.7	579,000	409,000	--	277,000
Clarke	Clarke County State Bank, Osceola	50.2	45.6	26.2	25.8	55.6	51.3	288,000	530,000	232,000	80,000
Clay	Farmers Trust & Savings, Spencer	55.5	50.1	30.2	29.1	62.8	57.5	696,000	87,000	32,000	635,000
Clayton	Central State Bank, Elkader	32.2	31.0	12.8	12.6	36.8	35.0	621,000	345,000	32,000	14,000
Clinton	Clinton National Bank, Clinton	93.0	84.5	44.1	41.2	104.8	98.8	899,000	1,052,000	130,000	123,000
	First National Bank, Clinton	72.6	66.7	43.2	36.7	79.1	73.6	474,000	652,000	359,000	31,000
	DeWitt Bank & Trust, DeWitt	56.7	50.5	30.2	30.3	62.4	56.1	748,000	830,000	220,000	31,000
Crawford	Crawford County Trust & Savings, Denison	41.5	38.4	24.9	26.9	45.6	42.2	338,000	414,000	365,000	190,000
Dallas	Perry State Bank, Perry	60.7	59.8	33.3	33.8	68.3	67.3	605,000	478,000	271,000	54,000
	Brenton National Bank, Perry	59.5	52.4	29.6	27.6	64.5	57.9	482,000	488,000	221,000	53,000
	Brenton Bank & Trust, Adel	56.4	52.6	29.9	31.2	61.9	58.1	438,000	321,000	160,000	352,000
Davis	Davis County State Bank, Bloomfield	40.1	35.0	18.7	19.0	44.5	39.2	260,000	268,000	264,000	366,000
Decatur	Decatur County State Bank, Leon	34.9	31.0	18.3	19.4	38.0	34.0	272,000	429,000	350,000	484,000
Delaware	First State Bank, Manchester	39.9	35.7	23.6	21.5	45.1	41.3	568,000	421,000	220,000	81,000
Des Moines	First National Bank, Burlington	105.2	98.5	66.4	54.6	118.2	112.4	1,591,000	1,418,000	248,000	221,000
	Hawkeye Bank, Burlington	91.5	88.6	53.7	48.8	100.9	97.4	1,216,000	1,242,000	215,000	105,000
	Farmers & Merchants Bank, Burlington	66.1	63.5	22.4	21.4	75.4	72.0	510,000	550,000	29,000	24,000
Dickinson	First Bank & Trust, Spirit Lake	28.2	26.7	14.1	12.9	31.6	30.0	280,000	243,000	86,000	231,000
Dubuque	Dubuque Bank & Trust	176.4	161.4	85.9	127.4	249.1	225.8	644,000	1,200,000	2,097,000	488,000
	American Trust & Savings, Dubuque	175.8	153.1	83.6	82.0	199.1	183.7	1,012,000	1,184,000	1,277,000	700,000
	First National Bank, Dubuque	163.2	153.5	94.1	99.4	204.1	178.1	1,413,000	1,262,000	903,000	859,000
Emmet	Emmet County State Bank, Estherville	71.7	59.6	31.0	31.2	79.9	68.3	810,000	841,000	214,000	80,000
Fayette	Oelwein State Bank, Oelwein	53.2	50.5	31.3	31.2	59.6	56.4	619,000	743,000	459,000	454,000
	First National Bank, Oelwein	50.2	48.0	23.0	27.7	57.3	57.2	(2,375,000)	753,000	2,939,000	74,000
Floyd	First Security Bank & Trust, Charles City	73.7	65.1	40.6	39.5	81.8	74.9	525,000	874,000	252,000	134,000
Franklin	First National Bank, Hampton	46.7	44.6	23.2	20.7	51.6	49.7	638,000	603,000	173,000	20,000
Fremont	Fremont County Savings Bank, Sidney	23.2	21.9	14.2	15.9	26.5	25.3	181,000	272,000	370,000	228,000
Greene	Home State Bank, Jefferson	55.4	51.0	30.3	33.2	62.3	59.8	381,000	547,000	299,000	95,000
	Brenton State Bank, Jefferson	53.3	48.0	29.0	28.6	58.8	53.4	473,000	392,000	160,000	279,000
Grundy	Lincoln Savings Bank, Reinbeck	37.3	35.5	21.7	19.4	41.2	39.3	329,000	272,000	125,000	125,000
Guthrie	Guthrie County State Bank, Guthrie Center	28.9	26.7	12.4	11.6	32.4	30.0	508,000	442,000	--	94,000
Hamilton	Farmers National Bank, Webster City	72.6	59.6	43.2	34.5	79.1	72.9	474,000	1,361,000	359,000	257,000
Hancock	Hancock County National Bank, Garner	37.0	34.6	[illegible]	12.7	41.1	38.5	418,000	271,000	5,000	763,000
Hardin	Hardin County Savings Bank, Eldora	63.2	58.6	31.5	30.0	71.4	67.7	858,000	814,000	261,000	10,000
	Citizens State Bank, Iowa Falls	57.1	49.1	44.2	41.4	65.3	60.5	1,228,000	1,062,000	146,000	183,000
Harrison	First National Bank, Missouri Valley	[illegible]	27.8	14.7	14.4	32.6	30.9	357,000	305,000	160,000	110,000
Henry	Henry County Savings Bank, Mt. Pleasant	[illegible]	55.1	22.2	21.7	65.1	60.1	121,000	549,000	390,000	642,000
Howard	Cresco-Union Savings Bank, Cresco	48.1	43.7	24.4	22.1	53.7	49.0	673,000	495,000	166,000	255,000
Humboldt	Humboldt Trust & Savings, Humboldt	62.5	55.6	29.8	28.0	68.0	61.7	321,000	442,000	130,000	170,000
	Hawkeye Bank & Trust, Humboldt	58.0	47.8	32.5	26.9	66.2	54.6	135,000	136,000	559,000	483,000
Ida	Ida County State Bank, Ida Grove	60.0	52.2	42.6	40.1	69.4	63.3	439,000	786,000	249,000	16,000
Iowa	Farmers Trust & Savings, Williamsburg	35.7	33.3	17.3	16.7	39.8	37.1	505,000	377,000	149,000	145,000
Jackson	Maquoketa State Bank, Maquoketa	74.8	71.9	45.9	46.9	85.6	82.5	781,000	2,003,000	149,000	116,000
	Hawkeye Bank & Trust, Maquoketa	66.5	64.7	40.8	37.7	74.8	72.6	755,000	606,000	149,000	168,000
Jasper	Jasper County Savings Bank, Newton	100.3	94.9	54.2	50.0	110.1	104.1	1,523,000	1,375,000	34,000	50,000
Jefferson	First National Bank, Fairfield	55.4	48.4	28.3	25.3	62.5	54.5	953,000	861,000	180,000	210,000
Johnson	First National Bank, Iowa City	190.5	166.3	112.6	95.3	207.7	184.9	1,512,000	1,335,000	350,000	325,000
	Iowa State Bank & Trust, Iowa City	152.8	125.2	105.9	77.0	172.5	144.8	1,994,000	1,445,000	630,000	312,000
	Hills Bank & Trust, Hills	123.6	101.6	75.2	37.4	140.3	111.2	1,689,000	1,338,000	943,000	181,000
Jones	Monticello State Bank, Monticello	115.4	99.7	58.4	55.2	135.5	120.5	2,735,000	2,331,000	98,000	98,000
Keokuk	Hayesville Savings Bank, Hayesville	42.5	39.2	27.7	23.1	48.9	45.6	543,000	595,000	60,000	--
Kossuth	United Central Bank, Algona	63.2	57.5	42.7	34.3	71.0	69.0	873,000	528,000	163,000	21,000
Lee	State Central Savings Bank, Keokuk	70.5	63.4	26.6	25.0	78.9	71.2	651,000	510,000	180,000	311,000
Linn	Merchants National Bank, Cedar Rapids	405.4	406.1	223.4	184.4	523.0	561.8	2,551,000	3,725,000	2,144,000	2,344,000
	Peoples Bank & Trust, Cedar Rapids	160.5	144.7	59.4	59.0	190.8	173.3	2,576,000	2,322,000	215,000	131,000
	Farmers State Bank, Marion	106.5	89.5	46.7	42.9	118.6	102.3	1,300,000	1,251,000	94,000	153,000
	Norwest Bank, Marion	72.9	70.5	34.2	36.9	83.2	77.2	(34,000)	165,000	1,149,000	412,000
	First Trust & Savings, Cedar Rapids	54.5	48.3	23.4	23.4	60.9	54.9	705,000	762,000	93,000	167,000
Louisa	Peoples National Bank, Columbus Junction	37.6	33.3	24.9	20.8	41.8	37.4	454,000	397,000	122,000	90,000
Lucas	National Bank & Trust Co., Chariton	70.0	57.9	30.3	31.0	75.3	64.2	(2,129,000)	64,000	2,362,000	997,000
Lyon	Rock Rapids State Bank, Rock Rapids	32.0	29.8	20.8	18.4	36.5	34.0	344,000	292,000	47,000	64,000
Madison	Union State Bank, Winterset	46.6	46.1	28.6	32.2	53.4	51.4	(32,000)	139,000	633,000	893,000
Mahaska	Mahaska State Bank, Oskaloosa	73.9	65.5	39.9	40.2	82.4	76.0	928,000	810,000	191,000	380,000
	Iowa Trust & Savings, Oskaloosa	53.7	40.7	33.7	29.3	64.2	48.2	373,000	611,000	357,000	75,000

Marion	Pella National Bank, Pella	64.1	58.6	34.7	33.1	73.6	67.6	963,000	990,000	27,000	45,000
	Community National Bank, Knoxville	56.7	52.9	32.3	31.2	61.2	58.6	154,000	375,000	681,000	56,000
	Marion County State Bank, Pella	56.8	42.2	19.6	17.8	56.5	48.8	748,000	719,000	78,000	(17,000)
Marshall	Security Savings Bank, Marshalltown	122.8	111.0	54.8	56.4	144.4	131.6	1,427,000	1,198,000	324,000	405,000
	Fidelity Brenton Bank, Marshalltown	78.9	72.8	47.0	47.6	89.0	86.1	534,000	571,000	142,000	63,000
	Commercial State Bank, Marshalltown	53.7	46.6	28.5	26.7	58.5	53.7	378,000	492,000	100,000	100,000
Mills	Glenwood State Bank, Glenwood	36.3	33.5	12.7	12.5	42.3	39.2	166,000	1,195,000	--	127,000
Mitchell	Home Trust & Savings, Osage	39.3	34.5	10.5	10.7	45.2	39.6	638,000	536,000	--	--
Monona	Onawa State Bank, Onawa	44.0	40.7	25.6	24.2	48.7	46.9	127,000	654,000	834,000	21,000
Monroe	Peoples National Bank, Albia	50.8	42.5	36.9	30.9	58.0	48.8	1,169,000	1,158,000	(16,000)	125,000
Montgomery	Houghton State Bank, Red Oak	64.0	56.3	37.9	38.1	70.4	63.5	1,231,000	1,153,000	116,000	248,000
Muscatine	First National Bank, Muscatine	128.2	114.9	103.4	88.9	146.5	119.5	1,629,000	1,342,000	190,000	320,000
	Central State Bank, Muscatine	112.7	105.3	43.9	42.5	133.8	120.6	1,624,000	1,055,000	87,000	20,000
O'Brien	Security State Bank, Sheldon	49.8	47.2	36.5	35.2	56.1	53.2	678,000	863,000	284,000	200,000
Osceola	Sibley State Bank, Sibley	33.9	30.0	25.1	22.1	37.9	34.4	357,000	448,000	144,000	42,000
Page	Page County State Bank, Clarinda	46.8	43.8	14.4	14.2	51.6	48.8	573,000	578,000	17,000	--
Palo Alto	Palo Alto County State Bank, Emmetsburg	46.9	41.5	23.8	21.7	51.5	46.7	339,000	400,000	306,000	138,000
Plymouth	LeMars Savings Bank, LeMars	61.9	53.9	29.2	29.7	72.1	63.6	1,038,000	1,017,000	220,000	202,000
Pocahontas	Laurens State Bank, Laurens	33.6	30.6	18.6	16.9	38.9	36.4	503,000	364,000	84,000	197,000
Polk	Norwest Bank, Des Moines	834.3	800.0	699.6	579.1	1,180.9	1,108.1	8,592,000	4,281,000	7,433,000	7,801,000
	Bankers Trust Co., Des Moines	435.2	527.9	318.0	321.1	618.2	729.8	1,718,000	2,175,000	1,800,000	1,489,000
	United Central Bank, Des Moines	263.0	276.3	133.0	136.3	341.4	427.9	2,016,000	345,000	1,091,000	1,838,000
	Brenton National Bank, Des Moines	177.3	84.7	102.2	49.2	197.8	97.1	646,000	445,000	806,000	789,000
	Valley National Bank, Des Moines	167.2	166.8	87.3	82.0	237.1	232.0	1,281,000	1,611,000	900,000	1,689,000
	West Des Moines State Bank	116.7	101.1	74.3	63.2	132.7	122.6	2,184,000	2,075,000	372,000	331,000
	Plaza State Bank, Des Moines	95.9	81.7	60.5	55.9	104.4	91.2	509,000	248,000	799,000	1,045,000
	Hawkeye-Capital State Bank, Des Moines	85.1	83.3	60.7	54.6	98.1	109.0	857,000	735,000	553,000	397,000
	Iowa State Bank, Des Moines	56.1	46.9	16.7	13.8	68.0	56.3	1,117,000	1,093,000	98,000	21,000
	Hawkeye Bank & Trust, Des Moines	55.7	49.5	42.5	33.4	62.8	55.5	995,000	548,000	68,000	61,000
Pottawattamie	Council Bluffs Savings Bank, Council Bluffs	149.9	135.6	72.3	71.7	170.2	157.6	2,512,000	2,161,000	--	300,000
	First National Bank, Council Bluffs	98.4	95.4	47.0	51.9	107.7	104.7	677,000	(2,890,000)	383,000	2,594,000
	State Bank & Trust, Council Bluffs	77.2	72.7	47.9	48.8	84.8	83.2	1,118,000	972,000	144,000	128,000
Poweshiek	Poweshiek County National Bank, Grinnell	66.8	59.2	37.8	31.3	73.5	66.6	821,000	738,000	114,000	60,000
Ringgold	Hawkeye Bank & Trust, Mt. Ayr	31.7	31.9	18.2	20.0	34.6	34.8	(316,000)	413,000	836,000	99,000
Sac	Sac City State Bank, Sac City	33.8	32.1	13.1	14.1	37.1	35.3	228,000	360,000	300,000	131,000
Scott	Davenport Bank & Trust, Davenport	538.2	452.9	209.7	171.4	775.5	638.2	11,892,000	7,026,000	1,795,000	300,000
	Northwest Bank & Trust, Davenport	151.9	131.1	97.0	85.7	185.2	174.7	1,401,000	1,553,000	200,000	172,000
	Bettendorf Bank & Trust, Bettendorf	84.8	83.4	44.2	40.7	92.8	92.5	645,000	706,000	200,000	172,000
	Brenton First National Bank, Davenport	66.6	61.1	40.9	39.4	74.6	70.3	583,000	774,000	230,000	48,000
	First Trust & Savings Bank, Davenport	60.0	68.3	44.6	49.0	66.1	76.5	(556,000)	(568,000)	1,386,000	1,973,000
	Central Trust & Savings, Eldridge	51.1	48.2	34.6	36.0	57.0	54.5	204,000	498,000	452,000	158,000
Shelby	Shelby County State Bank, Harlan	48.3	46.6	25.6	25.7	55.6	53.1	881,000	793,000	279,000	260,000
Sioux	American State Bank, Sioux Center	56.2	47.7	35.9	36.2	62.1	58.1	660,000	584,000	120,000	403,000
	Northwestern State Bank, Orange City	53.2	49.7	35.5	35.9	59.6	55.3	829,000	726,000	240,000	240,000
Story	First National Bank, Ames	104.7	86.7	50.5	44.0	113.8	95.3	1,422,000	1,254,000	173,000	28,000
	Union Story Trust & Savings, Ames	56.5	61.0	36.3	39.7	61.6	67.6	23,000	234,000	453,000	125,000
	University Bank & Trust, Ames	55.0	51.1	26.7	17.3	60.3	54.8	514,000	(328,000)	40,000	--
Tama	Farmers Savings Bank, Traer	38.7	34.1	12.5	13.0	43.2	40.1	454,000	445,000	183,000	--
Taylor	First National Bank, Lenox	31.3	30.9	22.9	20.7	34.6	33.9	122,000	152,000	626,000	597,000
Union	First National Bank, Creston	56.7	48.4	32.3	28.2	62.2	53.7	94,000	456,000	534,000	3,000
	Iowa State Savings Bank, Creston	52.1	50.2	14.4	23.6	56.6	54.9	(284,000)	480,000	843,000	93,000
Van Buren	Farmers State Bank, Keosauqua	27.9	26.2	18.0	16.8	31.4	30.0	71,000	387,000	415,000	250,000
Wapello	Union Bank & Trust, Ottumwa	121.0	110.4	59.2	58.5	135.0	126.2	1,172,000	1,093,000	887,000	780,000
	South Ottumwa Savings Bank, Ottumwa	65.7	57.7	27.4	25.6	73.6	65.1	936,000	741,000	239,000	170,000
	Norwest Bank, Ottumwa	63.5	59.9	42.2	34.4	69.1	65.7	287,000	154,000	273,000	66,000
Warren	Peoples Trust & Savings Bank, Indianola	101.6	94.6	56.3	50.5	116.5	100.0	1,178,000	1,599,000	384,000	115,000
Washington	Washington State Bank, Washington	51.1	47.1	17.3	14.1	57.1	52.3	929,000	791,000	31,000	--
Wayne	Citizens State Bank, Corydon	32.3	31.0	17.5	17.8	35.2	34.6	(8,000)	504,000	845,000	--
Webster	First National Bank, Fort Dodge	126.2	106.2	74.2	67.9	136.9	118.7	617,000	717,000	378,000	133,000
	First American State Bank, Fort Dodge	118.2	119.2	57.6	68.4	128.3	133.1	(2,368,000)	1,341,000	4,144,000	1,605,000
	United Central Bank, Fort Dodge	111.5	99.1	63.5	62.4	126.9	117.0	804,000	1,068,000	1,394,000	406,000
Winnebago	Manufacturers Bank & Trust, Forest City	54.2	44.4	23.4	14.2	61.0	51.8	322,000	228,000	353,000	611,000
Winneshiek	Decorah State Bank, Decorah	76.8	69.3	39.2	41.9	84.5	78.7	829,000	677,000	390,000	312,000
Woodbury	Security National Bank, Sioux City	262.0	258.3	142.1	119.1	319.6	332.2	2,671,000	2,566,000	1,228,000	750,000
	First National Bank, Sioux City	152.7	151.2	83.5	79.9	179.6	189.2	(725,000)	1,402,000	3,545,000	513,000
	Toy National Bank, Sioux City	126.2	131.4	74.2	77.1	136.9	160.8	617,000	(2,550,000)	378,000	2,890,000
	Norwest Bank, Sioux City	120.4	112.1	79.4	76.5	142.8	132.9	(1,640,000)	(1,649,000)	2,207,000	3,889,000
Worth	Northwood State Bank, Northwood	30.3	26.3	18.9	17.0	34.6	29.4	440,000	380,000	120,000	87,000
Wright	First National Bank, Clarion	46.4	43.2	21.7	20.0	53.5	50.8	523,000	650,000	337,000	46,000

Norwest D.M. is state's largest

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offs are made against the allowance. But it is through the loan loss provision that bad loans affect bank profits.

The $77.2 million amounts to 0.97 percent of the $7.9 billion in loans held by the 160 banks. A year ago, the loan loss provision was 0.87 percent of the loans held by the banks in the survey. In 1981, the survey banks had provided only 0.36 percent of their total loans for possible losses.

Iowa Banking Superintendent Tom Huston said he thinks that "bankers on the whole are recognizing problems that exist." But he added, "my concern is that new problems will continue to show up."

Even with the increased loan loss provisions, the state-chartered banks in Iowa emerged in 1983 with average capital-to-assets of 9.76 percent, up slightly from 9.74 percent in 1982, Huston said. And only 16 state-chartered banks had capital of below 7 percent, down from 22 the year before.

At all of the nine banks that lost money in 1983, loan losses were the culprit. For example:

- First National Bank of Oelwein lost $2.4 million, after taking a $2.9 million loan loss provision. "Can't you just forget about us?" bank president Richard Park asked last week. He said the loss provision was mostly for agriculture-related loans. "It was really just a matter of where we cleaned up the portfolio." He said the bank continues to have strong capital and expects to return to profitability this year.
- First American State Bank of Fort Dodge had a $2.4 million loss. But its loan loss provision was a whopping $4.1 million, about 7.2 percent of its total loans.
- In Chariton, the National Bank & Trust Co. lost $2.1 million. Its loan loss provision was $2.4 million. Again, the provision was "basically for farm loans," according to president Larry Rolfstad. He called it "a sign of the times" in south-central Iowa. Rolfstad also said that his bank has strong capital backing.

In contrast, the Oelwein bank made $753,000 in 1982 and took a loan loss provision of $74,000. First American had an even bigger turnaround. It made $1.3 million in 1982, a year in which it took a $1.6 million loan loss provision. And the Chariton bank had earnings of $64,000 in 1982, with a loan loss provision of $997,000.

For two of the banks in the survey, 1983 was the second consecutive losing year. Norwest Bank of Sioux City dropped $1.7 million in 1983, after taking a $1.7 million loss in 1982. The Sioux City bank had loan loss provisions of $2.2 million in 1983 and $2.9 million in 1982.

The other double loser was First Trust & Savings Bank of Davenport, which lost $558,000 in 1983 and $548,000 in 1982. Loan loss provisions at First Trust & Savings were $1.4 million last year and $1.9 million in 1982.

On the other side of the coin, a few banks had spectacular profit increases last year. Davenport Bank & Trust Co., which had led the 1982 profit list with $7 million in earnings, finished 1983 with $11.9 million, the highest profit recorded at any Iowa bank in at least five years and perhaps the highest ever..

Norwest Bank of Des Moines racked up earnings of $8.6 million in 1983, double its $4.3 million in profits in 1982.

George Milligan, president of Norwest of Des Moines, says, "We had an excellent year." Milligan said the bank worked to "stress quality" and, he said, "We controlled our credit risks and we also controlled our noninterest expenses."

The bank also put more of its funds into loans and it also benefited from the fact that "net loan losses were significantly reduced over 1982," Milligan said.

First National Bank of Council Bluffs had a $3.6 million turnaround, going from a loss of $2.9 million in 1982 to a profit of $677,000 in 1983.

In Sioux City, Toy National Bank turned a $2.6 million loss in 1982 into a $617,000 profit in 1983.

For both those banks, lower loan loss provisions made the difference. First National of Council Bluffs took a provision of $383,000 in 1983, compared with $2.6 million in 1982. Toy's loan loss provision was $378,000 last year, down from $2.9 million a year ago.

Deposit growth at the survey banks was a solid 8.7 percent in 1983, compared with about 9 percent in 1982. Deposits likely would have grown more rapidly in 1983 if Bankers Trust Co. of Des Moines, which had been expanding very fast, hadn't dropped $90 million in deposits last year.

Reflecting both changes in the money market and its desire to limit growth, Bankers Trust reduced its deposits in the $100,000-plus category by $60 million between the end of 1982 and the end of 1983.

By bidding aggressively for those funds, a bank can stimulate rapid growth, but those deposits also are usually the most expensive for the bank to attract and hold. Letting go of those deposits — and the investments made with them — also reduces a bank's assets and thus improves its capital ratios.

Herman Kilpper, president of Bankers Trust, said "We reduced our borrowed money position" because "the rates didn't make sense to us, the margin wasn't there." Instead, he said, the bank emphasized its focus on generating growth through the lending business.

The result was that Bankers Trust fell from being the state's second-largest bank to third place, with Davenport Bank & Trust moving back into the No. 2 spot in deposits.

Norwest of Des Moines, formerly Iowa-Des Moines National, remains the state's largest bank, with $834 million in deposits, $700 million in loans and assets of $1.2 billion. Merchants National of Cedar Rapids is third in deposits, with $405.4 million. United Central Bank of Des Moines barely hung on to fourth place at $263 million; Security National of Sioux City is fifth at $262 million in deposits.

The state now has 46 banks — out of about 640 — with more than $100 million in deposits, up nine from a year ago. Thirteen banks were added to the survey last year because they went over $50 million in deposits and another five that were already in the survey also moved into the $50 million-plus category.

Farm economy causes a crop of troubled bank loans

By TOM WITOSKY

Register Staff Writer

Iowa banks could be carrying more than $1 billion in questionable or bad loans by the end of this year primarily as a result of Iowa's poor farm economy, State Banking Superintendent Thomas Huston predicts.

"In 1975 when I started as bank superintendent, classified loans equaled about 16 percent of capital accounts. In 1983, it was 39.5 percent," Huston said in an interview last week.

While that represents a sharp increase, Huston says Iowa banks generally remain financially strong, noting that many of those classified loans are "substandard," loans that are likely to be repaid eventually.

But the banking superintendent, whose family has been farming since 1846 near Columbus Junction, has warned Gov. Terry Branstad and state lawmakers that things could get worse by the end of 1984.

"I'm not an economist because I don't like predicting things. I like facts, and they tell me there is big trouble this year," Huston said.

"There are a lot of people in this state who are terminally ill financially," he added.

Huston's warnings are important because as the state's top bank regulator, he is privy to some of the best and earliest information about the condition of Iowa's farm economy as a new growing season approaches.

Bank regulators are continually in the field conducting audits of state chartered banks. As a result, they also are listening to reports of problems farmers across Iowa are having trying to get operational money for this year.

Branstad and lawmakers, already faced with a state treasury barely in the black, say they are taking Huston's predictions seriously.

> 'There are a lot of people in this state who are terminally ill financially.'
>
> — Thomas Huston

"I'm not as pessimistic as Mr. Huston, but he is making an excellent point," said State Representative William Harbor (Rep., Henderson), a grain elevator operator who has discussed the problems with Huston. "It's clear to me that he may not be that wrong, either."

House Speaker Donald Avenson (Dem., Oelwein) said many individual bankers have seconded Huston's assessment. "Some bankers are saying they might have to turn down as much as 25 percent of the operational loan applications" from farmers, he said.

Huston said he has met twice with Branstad and his staff in recent weeks and plans to meet with them again as the planting season progresses.

It was in the wake of those sessions with Huston that Branstad confronted U.S. Treasury Secretary Donald Regan, the superintendent says. The governor, who was in Washington, D.C., attending last month's meeting of the National Governors Association, was critical of the high interest rates farmers must pay.

After the meeting, Branstad accused Regan of being "insensitive" to the plight of farmers, who are entering another growing season facing as much as 14 percent interest on the operational loans.

In dollars, Huston said bank regulators last year classified more than $808 million in loans, or almost 40 percent of all bank capital in the state, in three categories — substandard, doubtful and losses.

Substandard loans are those considered by regulators to have only minor problems and are likely to be repaid. Of all classified loans, substandard ones make up the greatest share.

Doubtful loans and those classified as losses are those for which regulators have little or no hope for repayment, usually forcing banks to write-off and pay for the loans.

Huston says he has little hope the growing tide of questionable loans can be stemmed in the near future.

"I just can't see anything that is going to turn this around. I don't know what we are going to do," he said.

As a result, he now predicts that classified loans by year's end will equal 50 percent of the

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Banks face tough decisions on farm operating loans

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capital accounts held by banks. In 1982, all Iowa banks reported capital accounts totaling $2.2 million.

Capital accounts are those financed by bank stockholders with their own investment as well as any profits held over the years of operation.

On average, capital accounts in Iowa banks equal 9.5 percent of total assets, which Huston said is higher than the national average. He said that shows the relative strength of the state's banks.

The $808 million in classified loans is less than 10 percent of all loans, according to 1982 bank figures reported to the Iowa Department of Banking.

Because of those factors, Huston maintains that almost all banks in Iowa remain solid. But, he adds, "I don't care how well fixed you are, you can't take a battering for a long time without getting into trouble.

"High interest means high risk and that is what this state has right now," he said.

"It isn't even the new farmers anymore," Huston explained. "I'm talking about the 50-year-old who has always paid his bills and always got the job done right. Interest rates are killing him and there is nothing he can do about it."

Already, Huston said, a number of banks are facing the reality of writing off a large amount of bad debt.

"It's tough telling a bank with $20 million in assets that they have losses of $500,000 to write off. That's two years of earnings for them," he said.

Huston and others contend there is a three-prong problem attacking even some of the most successful Iowa farmers.

Interest rates, they contend, are now so excessive that the costs of production far outstrip any profit possible from the sale of grain and livestock.

In addition, the interest rates are major factors causing plummeting land values that have cut the net worth of some millionaire farmers by as much as 50 percent.

Thomas Huston

To recover, some lenders are forcing their borrowers to put some of their land on the market. By doing that, however, it places greater downward pressure on land values.

Now, property once valued at $3,000 an acre in some counties is for sale at $2,000 or even less. And there is little or no market for it.

"With interest where it is, who wants to buy more land?" asked Huston.

Patricia Berry, director of the Farm and Land Institute of the Iowa Association of Realtors, said that multiple listings of Iowa farmland increased during the last two years and are expected to continue rising.

In 1982, there was 169,386 acres put up for sale in Iowa through these real estate brokers. In 1983, that increased to 220,582 acres or almost 25 percent. In addition, listings for January and February 1984 reflect a 27 increase when comparing figures for the same period in 1982 and a 6 percent increase from a year ago.

Berry said those figures don't include the amount of land put up for sale by forced auction or land sold without a real estate agent.

The declining land values place many farmers in a bind. Farmers who still owe money on loans which were acquired in the days of higher land values suddenly are staring at reduced equity in the same property. Yet, they still need additional loan money to finance this year's purchase of seed, fertilizer, fuel and feed.

Huston said a majority of the state-chartered banks will be confronted with very tough decisions this month, particularly when considering an operational loan for a farmer already heavily in debt.

"The majority of banks will face those kinds of problems one way or another. It has grown the last two or three years, but this will affect just about everyone," he said.

Huston said that no one should be fooled by reports that the recovery in the national economy is having any effect here on the farm industry.

"Things might be better in Michigan, but there is real trouble here. Iowa is in a quagmire that it can't escape. No one should be fooled that Iowa is going to get out of it. High interest rates won't work to help Iowa," he said.

Troubled loans increase at PCAs, land banks, special report shows

By DON MUHM

Register Farm Editor

A special report issued last week by the Farm Credit Administration shows disturbing upturns in loan losses, loan liquidations and property acquired through foreclosure by its member institutions in much of the nation's heartland — its corn, soybean and wheat growing states.

But as a percentage of the total loans outstanding, the number of troubled loans is still relatively small.

And a "seasonal improvement" in the farm economy is expected to offset somewhat the grim picture of the Midwestern credit situation that emerges in the study, which is based on a new set of statistics developed through a monitoring and reporting system enacted 18 months ago.

The study reviews the operations of two major farm lenders, the Production Credit Associations, which provide short-term farm operating loans, and the federal land banks, which provide long-term credit for farm real estate purchases.

There are 12 farm credit districts in the nation. For the PCAs, the report shows that the value of loans in some stage of the liquidation process ranged from a high of nearly $150 million, for 2,904 borrowers, in the Louisville, Ky., district, to a low of $27.9 million in the St. Paul region last year.

A loan in the liquidation process is one in which some formal collection effort has been made. It may represent a voluntary sale of assets or court action.

For the land banks, the highest total of loans in liquidation was found in the Federal Land Bank District of Wichita, Kans., at $121 million. The land bank in the Louisville district had $65.5 million in loans in some process of liquidation, loan losses of $3.8 million and property acquired valued at $33.4 million.

None of the five farm credit districts analyzed by the Register, including the Omaha unit of which Iowa is a part, showed much more than a "troubled" farm economy. The federal agency refers to it as "increased loan stress."

Despite that, an "improved" outlook was seen by Donald Wilkinson, a former state director of agriculture in Wisconsin and the governor of the Farm Credit Administration in Washington, D.C., for the past seven years.

Wilkinson pointed out that loan losses are covered by reserves and earnings, and that both PCAs and the land bank units had declines in earnings because of efforts "to reduce net interest margin and loan fees to help troubled borrowers."

He said that he feels that there are economic problems for farmers in "certain areas and for certain commodities," as the report on 1983 for the 12 farm credit bank districts nationally attests.

However, getting a good look at the prospects for the farm economy is difficult, Wilkinson said, because of the uncertainty about foreign demand for U.S. farm goods after a disturbing drop in exports in the last couple of years and the surprisingly short-lived benefits for farmers from last year's mammoth and expensive payment-in-kind program.

Wilkinson's comments came after his office issued the report for the two institutions for 1983. Both are major forces in the farm economy. The PCAs handled about 16.3 percent of all non-real estate farm debt outstanding, while the federal land banks have 43.1 percent of all farm real estate debt in the United States.

Although both operations are federally chartered and supervised, no government funds are involved in the lending operations of either. Money they lend comes through the sale of bonds by the Farm Credit System to investors in the nation's money markets.

A look at the Farm Credit Bank of Omaha:

(includes Iowa, Nebraska, South Dakota and Wyoming)

Production Credit Associations	**1982**	**1983**	**% Change**
Charge-offs (losses)	$14.6 million	$29.6 million	+ 103%
Acquired property	$5.2 million	$12.7 million	+ 144%
Loans in process of liquidation	$41.4 million	$49.5 million	+ 20%
Federal Land Bank	**1982**	**1983**	**% chge**
Charge-offs	$523,000	$2 million	+ 282%
Acquired property (number)	23	34	+ 48%
Acquired property (value)	$1.6 million	$5.5 million	+ 244%
Loans in process of Liquidation (number)	96	203	+ 111%
Loans in process of Liquidation (value)	$21.5 million	$40.8 million	+ 90%

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The loan losses, or write-offs, at the nation's PCAs, which are credit cooperatives, increased by nearly 50 percent in the past year, to $238 million from $159 million. Losses were much smaller for the Federal Land Banks, totaling $10 million nationally last year, compared with $1.8 million in 1982. That represents a 444 percent increase.

The statistics by themselves can be quite alarming in the absence of some perspective. For example, the land banks' losses are actually quite small in terms of the total outstanding loans of $51.1 billion to 682,270 borrowers.

The number of loans in the process of being liquidated by the land banks nationally is only 2,778, or four-tenths of one percent of the total. However, the number grew by 54 percent the past year. About 1 percent of the land bank loans had been delinquent 90 days or longer.

In the case of the PCAs, 340,837 loans for $30.2 billion were outstanding last year. National figures concerning delinquencies were not available, although the report shows that 4,122 loans were overdue 90 days or longer in 11 of the 12 farm credit regions and 6,820 loans were in the process of liquidation in 10 districts.

The statistics concerning farm credit are not uniform, and represent a new effort by federal farm credit officials "to monitor and report" on what's happening in this area of agricultural lending.

The report showed a disturbing similarity in the pattern for all of the farm credit districts in the Midwest area, but wide differences in individual monitoring categories at the same time.

PCA loan losses in the Omaha Farm Credit Bank District increased 103 percent the past year. This district includes all of Iowa, Nebraska, Wyoming and South Dakota. The dollar amount involved in those losses went from $14.6 million in 1982 to $29.6 million last year.

By contrast, the PCA losses in the St. Louis district, which includes Missouri, Illinois and Arkansas, declined by 3 percent, from $9.5 million to $9.2 million. That was the only district of the five analyzed by The Register to show a decline.

The heaviest PCA losses among the five farm credit districts were in the Louisville, Ky., district, where the "charge-off," or loss, in 1983 amounted to $63.3 million, following a loss of $55 million the year before. The district includes Kentucky, Indiana, Ohio and Tennessee.

Other PCA loan losses by district were: St. Paul — $13 million, up 37 percent, and Wichita — $13.9 million, up 58 percent.

Land bank losses by district were: Louisville — $3.8 million, up 660 percent; Wichita — $824,000, up 107 percent; St. Louis — $239,000, up 237 percent; and St. Paul — $76,000, up 204 percent.

In the Omaha district, there were 34 property acquisitions in the past year by the federal land bank, an increase of 48 percent. The value of the repossessions zoomed, however, by 244 percent, from $1.6 million to $5.5 million.

That figure can be discounted somewhat, however, because it includes the headquarters area of the old Adams Ranch-Shinrone Farms operation near Odebolt that now is for sale for something like $3.6 million.

Loan write-offs for the Omaha district land bank operation increased by nearly 300 percent, from $523,000 to $2 million, while the number of loans in some kind of process of liquidation increased by more than 100 percent, to 203 in the four-state area. The value of those loans increased by 90 percent, to $40.8 million.

However, the land bank organization has 16 associations in Iowa, with 39,500 borrowers and $3.4 billion outstanding, and Don Utoft of the Omaha land bank reported that only 3.3 percent of the Iowa borrowers were "past due" in payments, which is up 1 percentage point from a year ago.

"The remarkable thing is that something like 96 percent of our farmers have found some way to keep current," Utoft said.

In the case of the PCAs, James Besore of the Federal Intermediate Credit Bank of Omaha (the parent organization of the local PCAs) points out a similar statistic:

"Four out of every 100 loans are 'high-risk,' or where there is a need for a major [financial] adjustment if the farmers will be able to continue ..."

The 4 percent of the PCA borrowers considered to be "high-risk" includes "many who have listed farmland for sale," Besore added. But because the land market in general is "somewhat depressed," some of the borrowers in a financial bind "are unable to sell these assets to make the adjustments needed to bring their debt structure in line" with what the lender feels is more workable.

Despite such happenings, and based on "historical patterns and on the variability of incomes of individual farmers," Wilkinson of the Farm Credit Administration said he "expects credit problems to continue ... then improve seasonally through September ..."

What happens after September, Wilkinson said, will depend on worldwide economic and agricultural conditions related to the 1984 crop-growing season.

"We certainly hope these conditions improve so that a good number of delinquent borrowers can become current and begin to improve their financial situation," Wilkinson said.

Senator **Jepsen**. Thank you, Mr. Ross.

Now Mr. Charles Davenport, professor, Rutgers Law School, in Newark, NJ. Welcome. You may proceed.

STATEMENT OF CHARLES DAVENPORT, PROFESSOR, RUTGERS LAW SCHOOL, NEWARK, NJ

Mr. **Davenport**. Good morning, Mr. Chairman. My name is Charles Davenport. I teach income taxes at Rutgers Law School in Newark, NJ. I am pleased to be here this morning to discuss this important topic. I've been wrestling with it in a variety of capacities for most of the last two decades. I have a feeling of deja vu which may overwhelm or inhibit a thorough discussion. That's the way I feel this morning. I have plowed this ground a number of times. Audiences are always polite, but they seldom seem to be spurred to action. Even so, hope springs eternal, and I'm here this morning and hope to add something that will be of assistance to the committee.

First, I shall speak briefly about what I know, my knowledge; then I shall turn to what I would like to know but do not, my ignorance. My knowledge is pretty much set out in the written statement, but I will summarize it briefly. But it is my ignorance that I want to direct the attention and interest of this committee.

Before turning to what we know about the farm tax shelters, let me define a tax shelter. While my definition may not be suitable for all purposes, it is for our discussion this morning. We should think of a tax shelter as an investment in which the after-tax rate of return equals or exceeds the before-tax rate of return. In the tax shelter we must reverse what we usually think about taxes. In the tax shelter, the tax system does not impose a burden on investment. Rather, the tax system provides a substantial part of the return from the investment. For example, a tax shelter that has an annual rate of return of $10 for each $100 investment without taking tax benefits into account may offer an annual return of $15 per $100 investment after the tax benefits are accounted for.

Now here are a few I think largely uncontroverted assertions about farm investments.

Fact No. 1: Farm investments are frequently tax shelters, and we have known that for a long time. We have also known that a tax shelter is formed primarily from a combination of tax accounting rules and long-term capital gain status granted the income from the sales of certain farm assets. The tax accounting rules are generous in allowing premature deductions. The capital gain rules allow 60 percent of the gain from the sale of some farm assets to be deducted so that only 40 percent of the gain is included in income for most purposes.

Fact No. 2: We have also long known that tax shelters have a substantial impact on the sectors of the economy in which they are produced. A 1981 study I directed for the Department of Agriculture found that tax sheltering had the following impacts on the farming sector:

First, tax sheltering has exerted an upward pressure on land prices;

Second, tax sheltering has encouraged the growth and continuation of farm firms;

Third, tax sheltering has stimulated the production of tax sheltered crops;

Fourth, tax sheltering frequently causes a change in management practices; and

Fifth, tax sheltering allows the creation of financial reserves that sometimes mitigate financial difficulty.

This study added little to our general fund of knowledge. Most observers had known for decades that these things had been happening on the farm. While that study did not add a lot of knowledge, it confirmed our prior knowledge and did so in a systematic way. What was based on intuition before is now based on intellect.

Fact No. 3: At least some of us have long thought that we knew how to remove most of the tax sheltering possibilities from farm investments. There are some observers and advocates who have disputed this conclusion. What would appear to be a proper solution has never been tried. Instead, the Congress has spent a tremendous amount of time and effort in trying to limit farm tax sheltering to the deserving. There are at least two difficulties with this approach.

First, the resulting legislation has been complex and sometimes seems to produce paradoxical results. Sometimes the definition drafted to separate the wheat from the chaff does not define properly. Those who apparently were intended to be included are excluded, and those who were apparently intended to be excluded are included.

Second, this approach has not been successful and is unlikely to ever be successful. Those who are favored by this approach have always been sufficiently great as to perpetuate the consequences outlined above rather than to end them. It might be possible to reach a contrary result by confining the circle of beneficiaries to a very small group, but that does not seem either realistic or even desirable.

Fact No. 4: Despite all of our knowledge and legislative effort, farm investments continue to offer a tax shelter. Today's tax shelter is a little different from the one I first encountered nearly 20 years ago. In the usual case, more time and effort is devoted to the tax shelter than was devoted to it 20 years ago. Some persons are no longer able to participate on terms that they find favorable. The rules of the game are different. The design of the shelter, the manipulations necessary to benefit from it and even some of the benefits differ slightly, but tax sheltering today is no less an economic force on the farm than it was 20 years ago.

Fact No. 5: Over the long run, operations which are unable to exploit them and thus to capture the tax shelter benefit are usually unable to compete with those which do. While tax sheltering is not uniformly available in all kinds of farm operations, it is sufficiently widespread as to have been a factor in the demise of many farm operations. More importantly, it will be a factor in the demise of some farm firms in the future unless there's a dramatic change in policy. Continuation of the present set of tax policies necessarily means that some present farm operations will be terminated because they have not altered their behavior to accept the Federal subsidy extended through the tax system.

That's sort of a general summary of my written statement. Now I want to go on for another moment or two about what I think we might do in the future.

If we know all of the foregoing, one might ask, why we have done nothing? That's a complex story and I've said a few words on it in my statement submitted for the record. I am confident that much more can be said on that subject by others closer to the legislative scene. While we are awaiting this further elucidation, I would like to see some work done on one of the issues that I discussed in the statement. I think the committee might properly turn its attention to that issue.

The present farm structure has been built in part on the tax system. Those who have invested either as an absentee owner or a tiller of the soil or in any capacity between these extremes has in effect paid a price for the subsidy extended by the Federal tax laws. Those persons obviously would be very concerned about any change in the law which would jeopardize the value of their investments. They argue with considerable appeal to equity that those values should not be taken from them by a change in Government policy.

I am not unsympathetic to that claim, but I think we should push our thinking beyond it. We should try to think through what it means, rather than allowing it to act as a veto to sensible policy change. Persons who have made investments under the present law are not the only ones who have equitable arguments to make. Put another way, we know that the present policies will change lifestyles and destroy some existing investments. Are these persons any less deserving of legislative consideration? Are those who urge continuation of present policies any more entitled to the status quo than others are entitled to have it changed?

I do not know the answers to these questions. I do want, however, to suggest a means by which some of them might be solved. What I propose is that we give some serious thought to the following questions:

First, what changes in tax policy would be necessary to end the present tax shelter? Would they be practical? Would they be feasible?

Second, how would the change found in answer to the first question affect existing investments? If we think that we do not like the answer to this question, is there some compromise of the answer to the first that would give us a more favorable answer to the second question?

Third, if appropriate change in policies would harm present investment values, are there ways of ameliorating this result? What are they? Might it not be cheaper to have the Government buy the values created by the tax subsidy than to continue present policy?

Fourth, are persons who invested in light of existing present subsidies entitled to a greater degree of protection than others dependent on subsidies who sometimes see them cut without explanation other than the budget savings thereby achieved? For example, I believe the builders who built federally assisted housing have seen cuts in recent years. This kind of question is ultimately a political one—asking us to think seriously about our political process—it is appropriate to begin consideration in committee rather than on the floor when legislation is pending.

I do not know the answers to these questions except perhaps to the first one. I'm sure there are other questions to be asked. I do wish that we could focus on them rather than allowing the debate to be cut off simply because there are some who think their investments would be damaged by a policy change. Rather, I think we should consider the change and debate whether there is a public need to make adjustments to such a change.

Thank you.

[The prepared statement of Mr. Davenport follows:]

PREPARED STATEMENT OF CHARLES DAVENPORT

My name is Charles Davenport. I teach income taxes at the Rutgers Law School in Newark, New Jersey. I am pleased to be here this morning to discuss this important topic.

The matter you have under consideration is not a new one. I first became aware of it nearly 20 years ago when I represented a farm taxpayer before the Tax Court. We did well enough that I subsequently chaired the Agriculture Committee of the Section of Taxation of the American Bar Association. Even so, I had not thought very seriously about tax sheltering in agriculture until a little more than a decade and one-half ago when I was with the Office of Tax Legislative Counsel in the Treasury Department. While I left Government service soon thereafter, I continued to observe the farm scene. From 1979 until early 1981, I served as the principal tax consultant to the Department of Agriculture while it completed the Structure of Agriculture Project. The major findings of the tax study which I headed appear in "The Effects of Tax Policy on American Agriculture," published by the Department in February 1982 as Agricultural Economic Report Number 480. A good part of what I say this morning will be a distillation of that report.

I will first give my views on trends in agricultural tax sheltering during the time that I have been an observer. That will be followed by a summary of the report on the impact that taxes have had on agricultural structure. An analysis of the difficulties faced by a policymaker is set forth thereafter. There will be a few concluding remarks.

I

At the outset, let me say that my views on the development of agricultural tax sheltering are largely impressionistic and not based on empirical economic studies. Nevertheless, I and many astute fellow observers would, I think, agree on these trends. I have seen and heard them controverted in public by advocates, but I have never seen nor heard them seriously contested in private. One other warning is necessary. Much of this explanation is oversimplified and thus vulnerable to nitpicking criticism which does not alter the overall thrust of the story.

At the end of the 1960's, the tax shelter in farming was well known. It consisted of the combination of accounting methods which allow great flexibility in ascertaining when to deduct an item of expense or to report income and the conferring of the lower long term capital gain rates on much of the income realized in some farm operations. In the perfect agricultural tax shelter (and none of them were) of the late 1960's, no taxable income would be produced until the profit margin exceeded one hundred percent. Let me explain that by a simple example. If the operation produced expenses of $1000 and also income of $1000 which was reported as long term capital gain, there was a tax "farm loss" of $1000, and only $500 of the capital gain was included in income subject to tax. For tax purposes, the operation did not reach a breakeven point until the income was $2000, or twice the expense. Few farmers have ever reported that kind of profit except on the sale of land.

While the foregoing might appear to be generous, our tax accounting rules frequently allowed the farm expenses to be deducted before the income from the farm was realized. The resulting "farm loss" was enhanced, and it could be subtracted from income generated in other places, including other farm operations. Deduction of the farm loss from other income reduced the taxes on that other income. The taxes which were not paid on this other income were often said to be "deferred." Because the farm expense deductions had been claimed in earlier years, there were no farm expenses to offset the farm income when it was realized in later years. The gross farm income thus bore a tax that was, in a sense, a substitute for the taxes on the income sheltered by the premature farm deductions in earlier years. This substitute tax was paid after it should have been, it was "deferred." This was the "deferral" benefit of the tax shelter provided by farming.

The deferred taxes were described as a loan from the Government, and apologists for this scheme argued that they would be paid when income from the farm was realized. There was some truth to that; but frequently only some. The farm income that was later reported might well be long term capital gain. If so, only one-half of it would be subject to tax, and only a part of the deferred taxes would be paid. If the deferred taxes were thought of as a loan, then only a part of the loan was repaid. The balance was simply forgiven. This was the capital gain benefit of the tax shelter provided by farming.

Virtually all farm operations offered some opportunity for deferral. Some of them offered the capital gain benefit as well. Few, if any, operations allowed both the deferral benefit and the capital gain benefit to be conferred on all of the farm income. That was a theoretically possible result which might have been achieved, for example, in a properly designed cattle breeding herd or pistachio grove. Most farms offered some degree of one, the other, or both benefits. Whatever may have been the relative weight of these two benefits in attracting investors to farms, in practice, the deferral benefit produced the most significant tax savings. It was conferred on income produced from other activities. The capital gain benefit, however, would be produced only if there were farm income, and some farm investors discovered to their dismay that their farm tax shelters did not produce any income at all.

Despite this analysis, the 1969 farm tax legislation centered on the forgiveness of the loan. First, the definition of livestock which qualified for capital gain treatment was changed a little. Also, farm loss recapture rules, sometimes called the "excess deductions account," were enacted. Under them, some of the long term capital gain on farm assets would be converted to ordinary income. To the extent that these rules operated, the loan represented by the deferred taxes was not forgiven. The 1969 reforms, however, did not operate over a very wide spectrum of taxpayers. They applied only when nonfarm income exceeded $50,000 and then only to the extent that the farm loss exceeded $25,000 for the year. In 1969, it may be recalled, these amounts represented real money. These recapture rules were also complex, almost beyond comprehension. They continued and tacitly blessed the deferral aspect of the tax shelter by enacting a policy which said that a few taxpayers would have to repay a larger part of the deferred taxes.

The 1969 legislation had one other notable provision. Enacted at the behest of established citrus growers, it required that most of the growing costs of new citrus groves be capitalized rather than expensed. The following year, almond grove owners had this provision extended to plantings of new almond groves. Citrus and almond groves were rendered much less attractive as tax shelters.

Seemingly, the 1969 legislation was more effective in giving publicity to the tax shelter in farming than it was in curbing tax shelters in farming. The salad days of agricultural tax shelters followed. Syndicated agricultural tax shelters grew at amazing rates. Cattle, hog, and even chicken syndicates proliferated. Tomato "rollovers" became common. In California, syndicated vineyards led to the wholesale planting of grapes which threatened the economic health of the industry. In a search for new tax shelter crops that did not have market gluts, syndicators found pistachio nuts and kiwi fruits. One can not overestimate the importance of these tax sheltered pistachio groves when the American Embassy was seized in Teheran in 1979. Annual syndications ran into billions of dollars, and they were growing. Almond and citrus largely escaped syndication.

The economic results in many of these shelters were not favorable. Some appeared to be outright frauds; some seemed merely to have been poorly managed by inexperienced promoters rushing to cash in on the tax shelter; others fell on hard financial times, particularly later in the decade when interest rates and other costs rose more rapidly than product prices.

In 1976, new legislation was enacted to reduce the tax shelter opportunities. There was a number of rules. Corporations, except family corporations, were denied the use of cash accounting. Farm syndicates were not allowed to take some premature deductions. Farm investments were made subject to the "at risk" rules. Under them, a deduction is not allowed for expenses paid by funds borrowed on a nonrecourse basis. All of these rules had the effect of cutting back on syndication of farm investments. It is necessary to add that real estate investments are not subject to the "at risk" rules.

In the same year, however, that the income tax shelter aspect of farm investments was being cut back, a tax shelter under the estate tax was created for certain farm investors. In complex legislation designed to limit the shelter to real farmers, whatever they may be, the Congress allowed some farm land to be preferentially valued for estate tax purposes. As a consequence, the estate tax on qualifying farm investments was substantially reduced. In addition, provisions allowing installment payment of the estate tax, sometimes with a very low interest rate on a part or all of the unpaid tax, were liberalized. Some farm investments could qualify for these liberalized rules.

Three more events led to the shaping of the farm tax shelter as it appears today. In 1978, the amount of long term capital gains taken into income was decreased to forty percent of the gain. A farm operation which previously paid no tax even if its receipts were double its costs could under the new legislation remain tax free until receipts were two and one-half times costs. The tax "farm loss," thus the tax shelter, was increased although neither prices nor costs had changed.

In the next year, the Tax Court decided the Von Raden case. The Commissioner of Internal Revenue has authority to limit and postpone otherwise allowable deductions if their allowance would not clearly reflect income. His exercise of this power was prevented by the Tax Court. It found that income would be clearly reflected by allowing millions of dollars of prepaid feed to be deducted in the year of purchase rather than in the year of use when the income produced by it would be realized.

Finally, in 1981, the Congress enacted ACRS into law and also reduced the top marginal tax rate. ACRS increased depreciation rates on assets. Real estate structures may now be depreciated in 15 years. Many other improvements to farm land, for instance, vineyards may be depreciated in five years.

The 1984 tax shelter in agriculture is little changed from the 1981 model. Both are much different from the tax shelter of 1969. The present day shelter is founded in the estate tax as well as the income tax. The rules of play may be so much more complex that a careful adviser is needed. Agricultural tax sheltering today is much less notorious because the large brokerage houses no longer handle many syndications. Private placement of small syndications continues, but syndication activity is only a small fraction of what it was in the mid 1970's.

While the decline of syndication is largely explained by changes in the tax law, a little fuller explanation seems appropriate. Syndications are rarely evaluated on a commercial or market oriented basis. For relatively small investments of $100,000 or less, investors simply are not able to make good economic analysis of the income producing potential. Consequently, a syndicated tax shelter is usually sold solely on its tax shelter potential. The only certain return is the tax shelter return.

The certainty of return was questioned and the size of the return was reduced by a number of developments. The "at risk" rules prevented the claiming of the tax benefits from funds borrowed on a nonrecourse basis. These rules were sometimes avoided by devices which led to investor disenchantment when hard economic times came in the late 1970's and early

1980's. For example, despite promoter assurances that letters of credit would not be enforced, they sometimes were. The threat or reality of such enforcement had to occur in only a few instances before investors learned the hard truth. Circumvention of the "at risk" rules carried a risk that the investor was indeed at risk for the full amount of the tax shelter loss. The rules on farm syndications also had an impact on many of the investments. Whatever was left of syndications was interred by the 1981 cut of the top marginal rate from 70% to 50%. It reduced the size of the tax liability that could be deferred by an investment. If the deferral is analyzed as a loan, the amount of the loan was reduced. This was particularly devastating because nonrecourse borrowings were unable to actuate the loan.

While farm syndications were made unattractive, real estate as a tax shelter was being made more attractive through enactment of ACRS which liberalized depreciation allowances. Real estate investments remained exempt from the "at risk" rules, and the tax shelter they provide may be paid from nonrecourse borrowing. It thus offers much greater tax savings per dollar of out of pocket investment than do farm investments and many other tax shelters. The reduction in marginal rates could be compensated for by greater leverage in real estate but not in those investments subject to the "at risk" rules. Since that return is now much larger in real estate, other shelters, including farms, are at a disadvantage for the syndicated investment dollar. This is not to say that real estate is a much better investment. It may or may not be when considered apart from the tax shelter aspect. We should note that land used in farming will ordinarily be treated as farming, not as real estate.

On the other hand, the tax shelter opportunities in farming remain substantial if investors are able to evaluate the investment in economic terms aside from the tax shelter. In practical terms, this means investment in agriculture other than through syndications. There is no shortage of such persons. Frequently, they are nonfarm investors who have substantial income to shelter. In inflationary times, such as we have had for the last decade and one-half, the carrying of land on borrowed funds has been attractive. The land may appreciate at rates well in excess of inflation. The cost of carrying the land is deductible. The resulting appreciation is taxed only as long term capital gain. This combination is an attractive tax shelter. It may be, however, that recent declines in land prices and the generally ailing economy have frustrated past investors and made prospective investors fewer and more cautious. On the other hand, prospective investors may view falling land prices as opportunity to be seized when prices reach bottom. Each investor has his own interpretation of bottom.

Also, some estate tax shelter may be provided by an appropriate farm investment. It is now possible for a farm husband and wife to pass as much as $2.15 million (due to rise to $2.7 million in 1987) to a second generation free of estate tax. In contrast, nonfarmers can manage to pass only $650,000 (due to rise to $1.2 million in 1987) to their heirs free of estate tax. Proper lifetime giving will, of course, increase all of these amounts.

While the the estate tax shelter exists, some observers believe that it is theoretical and haphazard. The statute laying out its qualifications is so complex that a determination whether a taxpayer qualifies is difficult. Qualification must continue for a substantial period beginning before death and running for as long as ten years after death. Qualification may be lost by changes in facts or behavior which would be considered insignificant except for their impact on tax status. In short, the straight and narrow path is not always well marked and must be walked over a very long period. It is thus easy to fall by the wayside. So easy that some advisers report that they do minimal planning for qualification but consider it icing on the already double chocolate cake. Even so, it enhances the tax shelter.

One could ask if there is any lesson in this history. The Congress has spent a lot of time and attention on the problem of farm tax shelters. It has from time to time resolved to do something about them, and it has legislated. Usually, but not always, it has moved to prevent the undeserving from entering the promised land of the tax shelter while at the same time leaving entry for the deserving. The difficulty is that defining the deserving is a task beyond the ken of legislative draftsmen. We should not be surprised. Often, the deserving are described by their supporters simply as farmers--as if they were like pornography to be recognized without being defined. At other times, they have been described so precisely that a surgeon's scalpel is needed to separate them from the undeserving. Whichever direction is taken, the vision so clear in a member's mind at the committee markup of the bill is considerably more vague in the drafter's mind. This hazier daytime image is frequently put into statutory form as it filters through the drafter's mind in an allnight drafting session that same day. The result may exactly describe what the legislator wanted but fail to cover equally appealing situations which neither he nor the drafter imagined. The statute will, however, be applied by administrators and courts to innumerable such cases. They have to decide whether the statutory language excludes or includes the facts before them. Even a slight ambiguity in statutory language leads those who must decide concrete cases to speculate about what the legislature would have done if it had thought of the case to be decided. This process can sometimes produces apparently paradoxical results. Seemingly, intended beneficiaries are excluded and unintended are admitted.

The process also makes the law much more complex. The drafting of fine discriminations produces a prolix statute. Many, many taxpayers will have to deal with the additional complexity. Many of them will be disappointed, and all of them are likely to wish a pox on the drafter and also on the body that directed the drafter to write.

Finally, the more complicated statute is not a more effective statute. The tax shelter continues to exist. Its design and the persons occupying it differ from those of 1969. Syndications have largely, but not entirely, disappeared from the scene. The estate tax is now one of the design determinants. The techniques, devices, and legal mechanisms have changed, but the economic facts remain. The tax shelter is valuable, and there are taxpayers with suitable characteristics willing to undertake the manipulations and machinations necessary to capture this value for themselves. One might ask if we, like Columbus, undertook the voyage without gain.

II

The 1981 study that I directed found that the tax shelter had the following impacts on the farm sector:

1 Tax sheltering has exerted an upward pressure on land prices.

2 Tax sheltering has encouraged the growth and continuation of farm firms.

3 Tax sheltering has stimulated the production of tax sheltered crops.

4 Tax sheltering frequently causes a change in management practices.

5 Tax sheltering allows the creation of financial reserves that sometimes mitigate financial difficulty.

The study did not pass judgment on these impacts. I probably will not be so restrained today. We should, however, keep in mind that whether they are adjudged to be good or bad depends on the perspective of the person passing judgment. For example, a holder of land may well think that high land prices and factors tending to force them even higher are very good. In contrast, a young person with few assets desiring to make a livelihood in agriculture may view high land prices as undesirable. Indeed, they may prevent entry into farming as a land owner. Both persons should be aware, however, that government policy has the effects noted.

III

While all of these impacts are of importance to the farm sector, I want to focus on the alteration of management practices which the tax shelter makes inevitable. It is my belief that little attention has been paid to this aspect of the shelter, and yet it is, in my opinion, the one which produces the most confusion in the agricultural world. It may not quantitatively be the largest, but it is likely the least understood. Let me hasten to add that none of these effects seems well understood except by a few.

Changes in management practices are inevitable. Let me explain why and bear with my oversimplification. An operation which is unprofitable may be made profitable--and a profitable one more profitable--if the tax shelter is properly managed. The point is most easily demonstrated by a simple example. If the costs of raising a crop are $1000 and are also fully deductible, and if the sale proceeds may be returned as long term capital gain, proper management of the tax system will permit even an operation where expenses exceed income to return an after tax profit to some investors. Suppose the entire crop is sold for $800, which is reported as long term capital gain. While this sale produces an economic loss of $200, the tax system may convert the economic loss into an after tax profit.

The income tax return for this operation will show a "farm loss" of $1000. The income portion of the return will show a long term capital gain of $800 which, through the deduction allowed for sixty percent of the gain, will be reduced to $320 of taxable income. When the $320 of taxable income is combined with the $1000 of farm deductions, the net amount is a tax loss of $680. The value of this loss depends on the tax bracket on income other than that flowing from the shelter aspect of the farm. If this bracket is 50%, the $680 loss will reduce income taxes by $340. This $340 reduction in taxes on other income is a real economic benefit. It is, of course, more than the $200 loss produced by selling for $800 the asset which cost $1000 to produce. Overall, after the income tax savings are considered, the investment had a "profit" of $140, a quite good profit from selling a crop at less than the cost of raising. In contrast, if there had been no income other than the $1000 produced by the shelter, there would have been no tax savings to take into account. There would have been only the economic loss of $200. An operation without the other source of income would not be able to stay in business very long. The easiest way for such an operation to assure survival is to hunt up a source of income which can make use of the loss.

Since activity at the margin defines the competition for most industries, operations which combine income with tax shelters soon set the standards of operation. Any operation that has shelter potential will ultimately be combined with sources of income that can use the shelter. That result is inevitable if the operation offering the shelter is to survive. Difficulty arises when those operating shelters do not understand the necessity of combining the shelter with an income source. If they compete without making the combination, they will ultimately be forced out of business. I think that innumerable farmers have been caught in this bind. They have simply gone out of business, and they do not understand how it is that they lose money while their neighbors appear to profit.

Life is not so simple as hypothetical examples, and the combining of the tax shelter operation with other income sources is not so simple as was stated above. Indeed, few farm operations are pure shelters in the sense that all expenses are fully deductible while all income is returned as long term capital gain. But many operations offer some degree of shelter and thus have some potential for combination with other income sources. The degree of shelter differs from operation to operation, and the needs of persons seeking shelters and those offering shelters differ substantially. The rules allowing the shelters, though simple in concept, frequently require great skill for successful manipulation. The combination of the shelter with nonshelter income is likely to be successful only if there is a good tax adviser and a "farmer" willing to make decisions based on tax advice rather than agricultural advice. Sometimes, promoters and bankers will be a necessary part of the cast--promoters to locate persons needing shelters and bankers to make finances available for exploitation of the shelter. All of these forces add a degree of complexity to the life of the "farmer." All of them add considerations to the decisionmaking process that are far removed from the successful propagation of plants and animals. The skill of propagation is derogated and frequently subordinated to that of the tax adviser. But that is as it should be in the tax shelter world. The tax result may be far more certain than the horticultural or husbandry result. The tax shelter aspect of farm operations certainly accelerated and reinforced the changing of farmers from mere tillers of soil to captains of finance.

Finally, once the shelter operation is commenced, it is difficult to stop. If the shelter ceases, the chickens come home to roost. The taxes deferred in many previous years may all be telescoped into a single year. This impact may be substantial, and it encourages the continuation of operations that would otherwise cease. If, however, the operation is continued until death, the deferred taxes may be entirely forgiven because the basis of the assets will be stepped up to value. Death is absolution. It offers the opportunity to avoid the accumulation of tax liabilities "deferred" from prior years. The seeking of absolution may prevent retirement and discourage the transfer of management until the trauma of death. This possibility is another factor taking the destinies of farmers out of their own hands.

IV

Policymakers and others are aware that our tax policies pushed agriculture in these directions. There has been much rhetoric over the tax shelter. The Congress has never been willing to pass the legislation that would seem most effective. There has been a reluctance to change any of the tax influences on agriculture. I thought a few words explaining that reluctance might be in order.

A part of the reluctance seems based on an inability to comprehend the subsidy nature of the tax system. Let me say only that I have had innumerable opportunities to explain the subsidy flowing from the tax system. I do not consider myself inarticulate, and I usually come away from such explanations muttering that the listeners did not understand. The uninitiated do not understand the first time it is explained. Frequently, not the second, the third, nor even the fourth. It takes a lot of explanation and a lot of thinking about the explanation.

Along with incomprehensibility is incredibility. The subsidy flows in greatest amounts to the wealthiest taxpayers who can combine tax shelter farm investments with income producing investments, farm or otherwise. It thus reverses the normal assumption on which redistributive policies are based. There is a natural inclination to doubt the explainer rather to accept the fact that our usual policies have been reversed.

This mix of incredibility and incomprehensibility which supports present policies is spiced with uncertainty. No one can predict with certainty the direction in which a tax law change will push behavior. Even if individual behavior is predictable, the overall economic effect produced by millions of individuals, each acting in his own best interest, is not fully predictable. Uncertainty thus is added to the forces militating against change.

Another factor which argues for the _status quo_ is the weighing of the relatively quantifiable against the relatively unquantifiable. For example, if a farmer is told that a change in the tax laws will withdraw certain assets from the category of those treated as long term capital assets, the amount of the tax increase will be relatively quantifiable and to some extent immediate. In contrast, there is almost no way to estimate the impact that decision will have on any of the adverse effects discussed above. Also, since these effects are produced in an environment where there are numerous other influences, it is impossible even in retrospect to demonstrate the impact that a tax law change had. That which can not be measured in retrospect certainly can not be foretold. Predictions that a change will have such and such an impact are usually dismissed as the speculative doodlings of those practitioners of the blackest of sciences, economists.

Unpredictability also leads to another force supporting whatever is in place. Policymakers proposing changes are rarely restrained in their prophecy about the beneficial effect of the change. They wax euphorically about the Nirvana to be achieved through the policy initiative proposed. Since the public intuitively knows that uncertainty is the most predictable outcome, the policymaker overpromising an outcome is regarded among the populace with some suspicion. Indeed, cynicism and a belief that the change is based on undisclosed motives to achieve undisclosed ends may result.

The other side of this coin is the prophecy of doom that one hears in opposition to changes that would reduce subsidies. Never has the market system been more defective than when it is asked to shoulder a greater burden in allocating resources. We are told that the affected industry will disappear into the bankruptcy court; that products will no longer be produced; and some part of Americana will be irrevocably lost. Needless to say such dire predictions rarely come about. That is not to say that policymakers should be heartless in cutting off long standing subsidies. Wealth built on them can be jeopardized, and those in jeopardy are likely to resist with vigor. They have a need to be considered. The question is whether they should have a veto over a change in policy. Or should effort be devoted to ameliorating the impact on them while making a sensible policy change.

Conflict also militates against change. As noted above, what is sauce for the goose may well not be sauce for the gander. Whether a change is good depends on the perspective of the bird to which the sauce is about to be applied. Where tax shelter investments are concerned, those who are already farmers are favored over those who merely want to become farmers. If "farmers" are defined as those who are already in the business, many "farmers" are unlikely to desire any change. One side of the conflict may be better articulated than the other, and the side of those who are in some way beholden to the existing structure may be the better expressed.

There are also those who have a direct and immediate financial stake in the existing regimen. They may well be far more influential than their numbers or interests deserve, but they are in a financial position to see that they are exposited and represented before bodies of policymakers.

V

The conclusion to which one comes is that tax policy favors certain kinds of farm investments. The favorable tax result has produced overinvestment in those activities. It has also changed the rules of the game and introduced a number of new actors and considerations into farm decisionmaking. The decisionmaking is less agriculturally centered and more financially and tax oriented than it would have been without the tax shelter. The change of focus is not always recognized explicitly. It the source both of confusion and resentment by farmers who sometimes have extraordinary agricultural skills but little financial or tax expertise and thus must rely on others for it.

Without a fundamental change in the taxation of farm investments, the effects detailed above are likely to continue. Entry into farming as a land owner will be more difficult in the future than it was in the past. Financial and tax considerations will play an increasing role in farm management. Highly capitalized farmers with an acumen for tax expertise can be expected to prosper while those without either can be expected to wither and disappear.

It is not clear that any Congress would have knowingly legislated policy that produced these results. In fact, they seem to conflict with the aims of other legislation. The results have, however, been produced--although certainly not solely by the tax system.

If the foregoing assessment of the political system is not too wide of the mark, there is little reason to think that the present tax rules will be altered significantly. One can expect tinkering around the edges from time to time, but no fundamental change is to be expected. The conclusion to which one must come then is that the present influence of the income tax on farm investments is likely to continue in the directions outlined above.

VI

In closing, I will add a few words on the so called flat tax and value added taxes.

The tax shelter would be little affected by a flat tax. It would continue to exist. It is true that the shelter might be as valuable to a low income person as to a high income person. We should not, however, fool ourselves and think that the low income person would take advantage of the shelter. Tax shelters would continue to require investment, and in this society, most of the investment comes from high income persons, people with wealth. They would thus be in a position to take advantage of the shelter just as they are today. I think they would continue to do so. It is remotely possible that a flat tax would not contain the features of the law which now provide the shelter. Enacting such a tax might be any easier than changing the existing one.

A value added tax or national sales taxes presumably would be levied on consumption and not on investment. Even so, unless it entirely replaced our present income tax, the tax shelter aspect of farm investments would be unchanged. Even it did replace the income tax, the farm investment would remain as a shelter from the estate tax.

Neither of these alternatives offers a panacea to the present policy dilemma.

Senator **Jepsen**. I thank each one of you for your testimony and I'd like to start with a general question. That is, to what extent does Federal tax policy help small farm operations? Are most of these benefits received by bona fide farmers or part-time farmers, in your experience?

Mr. **Carman**. As I said, from the census of agricultural data that I presented, probably the Tax Code does provide some incentive for the small farms, but I'm not sure just how helpful these small farms are to the general agricultural economy. These are farms where the husband manages the bank, the wife works as a secretary, farms which may have 10 acres of Almond trees or a small vineyard of grapes that they regularly will have a tax loss on. It tends to be more of a way of life than something that really adds much to agricultural productivity.

This is encouraged by the tax system. As I said, on the other side, you have some of the medium-sized family farmers, the people that you were talking about in the beginning of the hearing, that suffer some adverse consequences because of the increase in production that comes from some of the tax incentives an the inelasticity of demand for many of the commodities that they're producing. With elastic demand increased, production actually decreases total revenue. You are producing more and getting less for it in a total sense.

So you may be promoting small farms—not really small family farms and they're not really commercial farms, on the one hand, and, on the other hand, making it difficult for the Midwestern type farm that I think you're concerned with.

Senator **Jepsen**. I think for a definition here we might—we will come back to this—what is a family farm?

Mr. **Harl**. Could I respond to that, Senator?

Senator **Jepsen**. Please.

Mr. **Harl**. There are many definitions of a family farm, some of which are statutory and some are regulatory. The definition I feel most comfortable with is the definition that is reasonably abroad in the sense that all or essentially all the management and control are provided by the family and the bulk of the equity capital if not all of the equity capital, the ownership or risk-bearing capital, is provided by the family, and a substantial amount of the labor is furnished by family members.

I think there are three dimensions here. One is the dimension of management. One is the dimension of providing capital. And the third is the question of labor. Some family farms do hire labor. When I was growing up on what I thought was a family farm, my father hired my cousin at a dollar a day or $2 a day and I don't think that caused it to cease to be a family farm. But, of course, if you go from that kind of wage relationship to a very large employer, you begin to wonder at what point it ceases to be a family farm. So if you don't press us too hard on where we have to draw the line, then I think I would feel comfortable with those three dimensions.

Senator **Jepsen**. In other words, a family farm is a farm with a family running it?

Mr. **Harl**. The family is running it and they are taking the risks and receiving the returns on the equity investment.

Senator **Jepsen**. A hands-on operation.

Mr. **Ross**. Your letter indicated in 1981 about 1 million individuals reporting farm income of $7.8 billion and 1.7 million reported losses of $16.3 billion. It's my understanding that there's no study as to how many were what I call real farmers that had those losses and how many had 80 acres and managed to lose something each year to offset against their salaries.

Senator **Jepsen**. If we have that breakdown for the hearing record, we would be glad to share it with you.

Mr. **Ross**. We do work for farmers with their taxes and many of them have had losses and they are what I call a real farmer. They bought confinement facilities that Neil referred to that got them in trouble. They bought the big tractors and did lots of nice things.

Senator **Jepsen**. In the 1970's.

Mr. **Ross**. After we got rid of our grain surplus to Russia, everything looked rosy. And now with the high interest rates which—I think the people we work for, the biggest difference between a farmer with income and one with losses is leverage or his interest load and a lot of times it hasn't been leveraged that far, but a drought or drop in hog prices—2 years ago the supply of grain—all of those things contributed. The income tax factors really had nothing to do with all that except may justify building confinement facilities easier with the 10-percent investment tax credit. The same way with buying equipment. In the last 2 years, that has not been true.

So I think we should look at 1983 instead of 1976 and 1981.

Senator **Jepsen**. What has changed?

Mr. **Ross**. The whole economic situation on the farm.

Senator **Jepsen**. In what way?

Mr. **Ross**. Their equity, if they own land, has dropped substantially. The drought had a big impact. The drop in grain prices, regardless of what you read in the paper, indications are on futures that grain will drop back to a lower level.

Mr. **Harl**. Senator, can I respond to that, too? I think that the single biggest factor since 1976, compared to 1984, in farming, if we had to reduce it to one thing, would be the decision made in October 1979 by the Federal Reserve to wring inflation out of the economy in a Saturday morning meeting. That is what eventually led—and it was not unexpected—to the high interest rates, initially high nominal interest rates, and to the wringing of inflation out and the decapitalization of land values. In normal times that would have led to a reduction in not only the nominal interest rates but real interest rates as well, with inflation adjusted. That's what didn't happen.

So now what we are dealing with, as a result of the effects of those policies over a period of about 5 years, is that we now have a diminished capital base for collateral and yet we're dealing with interest rates that cannot be absorbed within any reasonable cash flow for those who are heavy borrowers. And I would say that we're talking about roughly 30 percent of the farmers who are pretty heavily leveraged or the data indicate they are reasonably close to being loaned up. That's the group we're talking about. We have about 30 percent of the farmers who owe no money. They do not feel the effects of this to the same extent at all because farm commodity prices really aren't all that bad right now. This is one of the few times in the history of agriculture that we have had financial travail, deep trauma, when we didn't also have disastrously low commodity prices. It's basically two problems. We have the income price support problem on the one hand and the problem of what to do with this roughly 30 percent on the other who are heavily leveraged. Some started farming during that period. Some were people who brought in a son or son-in-law or daughter or daughter-in-law to enlarge the operation and make it possible for an additional family to live on the operation. They added an extra 160 acres. They added a four-wheel-drive tractor. And then the roof fell in on them because of the interest cost.

Senator **Jepsen**. And they went to the banker during that period and they said, "We want to put in a hog confinement and raise hogs now." And they wanted to borrow some money on it. The banker said, "How much do you need?" And they said, "$5,000." The banker said, "Why don't you get $100,000, and consolidate those short-term loans you have? That's better money management."

Mr. **Ross**. Banks have started looking at "cash flow," which is a new term for them. I was down home at Christmas and a neighbor of ours said he went to the bank and the bank said, "What's your cash flow?" And he said, "I ain't got none. If I had some I wouldn't be here." That's kind of humorous, but it's not funny to the individual.

Senator **Jepsen**. No. Mr. Ross, I think if I can identify and share with you some of my observations in Iowa—and I expect it's not atypical from other parts of the agricultural community in this country—one of the transisitions and things that were different—and I asked that question earlier—real things that are different right now today is that we are back doing business on the basis when people talk about financing and one of the first basic questions is, "How are you going to pay it back and when?"

The cash flow is the new—you said it very well. It has come back.

Mr. **Ross**. In the data I submitted, I submitted quite a few articles from the Des Moines Register as to what has happened to our banks—one that I mentioned there was a $50 million bank and their reserve loan loss went up $2.5 million last year. Here's a bank that only had $20 or $25 million loaned out.

Senator **Jepsen**. Mr. Davenport.

Mr. **Davenport**. This is going back a little now about the hog confinement facilities, but I'll pick it up anyway. I'm not an economist and I don't run models or anything like that, but I read farm newsletters. It is my belief that there's hardly a hog operation in the country that is not losing money if you look at hog prices and also look at what I would call budgeted costs—I don't really see a whole lot of operations that have real costs. We could conclude that these people were losing money hand over fist, given the prices of hogs and the budgeted costs. My conclusion is for somebody to stay in the business that long with those losses, there has to be something else there. And my conclusion is, if you play the tax system right, you can do it because frequently those hogs sell at true economic losses but the tax system converts the economic loss into profits. Mr. Ross' clients who are having difficulty probably weren't able to change their behavior satisfactorily to capture that tax benefit. They are being run out of business.

Mr. **Ross**. The only place you pick up a gain on that is when you sell the sows. A lot of people in the confinement facility raise feeder pigs and you have another group that buy these hogs at 50 pounds and then feed them out. Well, the 50-pound pig has no capital gains.

The capital gains on the sow herds are somewhat of a factor now, but I'm talking real farmers again. Real farmers don't work that into the computations.

The reason the farmers I work with went into hog confinement facilities was it's labor saving. Iowa State puts out all kinds of statistics that it costs $6 more to produce a hog in a confinement facility than it does in pasture-type facilities, but he can raise twice as many and if the price of hogs went up a little and he can cash flow it out. But the price of hogs didn't go up.

Senator **Jepsen**. You could relate that to the price of corn, too. I have a family farm interest and when the corn was $1.86 a bushel, feeder pigs were $60 for a 40-pound feeder pig, and you had an option there which was a pretty good one. You could sell the feeder pigs—that's like gold nuggests—or you could feed them out and if you're careful you can get $6.04 a bushel for your $1.86 corn.

Mr. **Davenport**. Just two very quick comments. First of all, if you pick capital gains only on the sows it may run close to half because the sex is pretty close to half and half. The other is when Mr. Ross says that his real farmers don't take that into account, that's their problem. That's why they are having difficulty.

Mr. **Ross**. I disagree with that.

Senator **Jepsen**. Well, this is a good panel. What is it they don't take into consideration?

Mr. **Davenport**. They don't take into consideration the interplay between ordinary deductions and capital gains on their sows. Their competitors do. In economic terms, the marginal operation is the one that defines what's going on, and those people who are making the calculation between ordinary deductions and long-term capital gains on the sows are circumscribing the circle, if you will, and they are fencing Mr. Ross' clients out.

Mr. **Ross**. Except it takes at least $1,000 in the facilities and probably more to just get into a feeder pig type of operation, raising feeder pigs. If you do that on any kind of scale, the financing is not there. So especially a lot of the younger farmers are going to feeding out facilities or they try to do it in the pasture, and they don't have the numbers there so they don't have enough income to really worry about it.

Mr. **Davenport**. That's their problem. They don't have enough income to worry about capital gains, and they have to go out and get it. If they don't know how to get it, they are going to die.

Mr. **Ross**. Talk to the bankers.

Senator **Jepsen**. Does anybody else have any comment before we go onto other topics?

Mr. **Harl**. I'm about halfway between these two positions. I think farmers are cognizant of the break in the section 1231 asset character of the sows, but they believe all the rest of the world is like they are in terms of cash accounting. I don't think it really dawns on them that they live in a world—and it's a world they have been in since 1918 or 1919 when the Treasury decided cash accounting could exist in farming even though inventories are a material income determining factor—so different from a nonfarm firm which must carry those into inventory and recognize that gain as you proceed along.

So I'm about halfway between the two. I think they are both looking at the same thing.

Mr. Ross. I'd like to make a statement. On a cash based accounting it's strictly deferrals and if you buy a pig in advance in one year you have to buy that same pig the next year. So it's a rather short-term deferral. The farmers that go through the Farm Management Associations, quite a few of those are on an accrual basis, and then they can make their decisions in the market based on the economics of the situation in the market instead of how it affects their taxes.

Now farmers aren't alone on this don't want to pay taxes mentality. They will hold their corn and get a good price in December and sell it for less in January and think that that's all right. It's not that they don't really know better. They just do it.

Senator Jepsen. In my opening statement I said that we had some luxury of time. That could be misinterpreted. I was referring to the 1985 farm bill, but actually we have some problems today in River City and we need to address them immediately and in fact we have a 1,200-page tax bill on hold—it's not in the conference committee and it is not being debated on the floor of the Senate. All the work has been done and it's going to stay on the floor of the Senate until we finish with the cutting of expenses because they're going to conference together. But for all intents and purposes, the work has been done.

But we are discussing, among other things, changing the capital gains holding period from 1 year to 6 months. I'd like to take a one, two, three, four quick rundown of this panel and could you tell me yes or no—would you change from 1 year to 6 months the capital gains holding period as to how it would affect agriculture?

Mr. Carman. No.

Mr. Davenport. No. It exacerbates the problem.

Mr. Harl. No.

Mr. Ross. No.

Senator Jepsen. Well, we know how the panel stands on that.

Mr. Carman. I was just going to comment that in terms of the cash accounting, the farm that's best able to use that is the one which is growing. You do have a problem of it being short term and once you get into it you have to continue doing it or you may face 2 years of income in one tax year. But if you're a growth-minded farmer, you're able to invest this feed in livestock—cattle or hogs—and continue to grow and the tax system is going to finance this growth.

My wife has a small retail store and when you're in that business you can be building up your inventory, putting all of your money back in the business, and at the end of the year when you count up how much your inventory has increased you have to report that as taxable income. So you can have a case with the small retailer who is trying to build an operation being forced to pay taxes at the end of the year on it.

In agriculture, this doesn't occur. You can postpone taxes and you can grow for 10 or 15 years and become very large if you do it correctly. We have had some dairy farmers and others in California that have really financed tremendous expansion through utilization of the tax incentives—it works.

Mr. Harl. Senator, then, if you're lucky enough to die, that's the end of the potential income tax liability.

Mr. Ross. One thing that hasn't been addressed here—and you mentioned the small retailer building up his inventory—if there is such a thing as a simplified equity of inventory but if income tax is deferred it would be almost enough to balance the budget for 1 year. We use it on farm implement dealers. We use it on grain operations, feed manufacturers, auto dealers, retailers, and what you're doing is to value your inventory back through the year.

Senator **Jepsen**. You're saying last-in, first-out ought to be utilized more?

Mr. Ross. The way it's utilized I don't think it makes economic sense. It's just a tax deferral, a big one, billions of dollars. I don't know how you get out of it now that we're in it.

Senator **Jepsen**. Well, as you know, I was in the tax planning business for a good number of years and I think one thing is apropos to put into the record here. There is, there has been for a long time, and in the foreseeable immediate future there's going to continue to be, two sets of tax laws, one for those who plan and one for those who don't. They're one and the same and if you don't want to plan, Uncle Sam or the State or a combination will do it for you. That's both living and dead, as you well know.

I'd like to explore two areas. One about the planning basis with estate taxes, very briefly, and two, while we have this panel here, I'd like to be sure to explore the connection or possible trade-off between interest rates and inflation.

I know, Mr. Harl, you said in your prepared statement that high interest rates are a matter of national security, and I appreciate and share that view. I think one of the concerns we have for national security is that if our economy is shattered and money is no good, we would have such internal turmoil that our external security would be secondary.

In any event, I'd like to paraphrase what you say and remind us all of another serious problem. A severe and chronic high inflation rate is a matter of national security. You may recall that inflation was public enemy No. 1 in 1980, and I would suggest that inflation was as much a cause of high interest rates that plague us today and any action that would spark inflation today would threaten our economic foundation now.

What has hurt the farm economy more, high inflation rates or high interest rates?

Mr. **Harl**. Senator, was your question which would help the farm economy more?

Senator **Jepsen**. What has hurt the farm economy more, high inflation rates or high interest rates? I don't know if there's a pat answer to these. I'm not trying to trap you. I'm just trying to get a dialogue going.

Mr. **Harl**. I don't think there really is an easy, quick answer to that, Senator. I would say that high real interest rates are clearly having a devastating effect on a segment of farmers. However, remember, I said earlier that approximately 30 percent of the farmers borrow no money. Many of them have CD's. My dear mother is retired, living in town, and owes nothing and she's gleeful over high interest rates. Every time I see her I'm reminded once again how nice it is that she's making more money than she and my father did farming because she happens to be in a very good creditor position in having CD's.

So we must realize that these effects are not uniform. Agriculture is not homogeneous nor is the economy generally. But for those who are borrowing money now, the high real interest rate is indeed devastating.

In terms of inflation, we had just the opposite problem then. The people who were gaining were the ones who were leveraged and land values were going up at least at the inflationary rate if not faster, and so those who were leveraged were the ones who were gaining from inflation.

People like my mother were not gaining at that time. They were seeing their real values decline if they were in a fixed principal form.

So what we have seen is a shift—I think a very profound one—from favoring one group to favoring quite a different group. We are in a transitional period. We are living with the results of that and I think we will have to live a few more years before we have equilibrium established from that shift. When you move from a time of inflationary expectations to a time when inflation is running like 3 or 4 percent, it just simply takes a while to adjust to that new regimen.

Senator JEPSEN. Mr. Ross.

Mr. ROSS. For the farmer who rented land, inflation helped and hurt. His $20,000 tractor that he kept 3 years was still worth $20,000 when he traded it in. He just had to put another $10,000 or $20,000 with it to get a new one. So his equity on his balance sheet kept going up. From a cash flow standpoint, it was going the wrong way. I think inflation hurts farmers because the price of their product does not track with inflation. Automobiles usually do. A lot of things will track with inflation, but farm commodities do not.

Senator JEPSEN. I'm trying to look at this from somewhat of a historical, broad perspective. I don't think there's any disagreement on the panel at this point in time that if there's one single thing that is most devastating on a day-to-day basis now to farm producers it's high interest rates. Does anyone disagree with that on this particular day?

Mr. HARL. Not for those who are borrowing money. The others are creditors and they're happy with high interest rates. But certainly for those borrowing money, Senator, I would agree with you.

Senator JEPSEN. As you've indicated over and over again, Mr. Harl, about 30 percent don't have any debt at all. Now I point out that every farmer pays the inflation rate regardless of whether he owes money. Every senior citizen on a fixed income, as you pointed out, pays for inflation. Inflation in the cost of production was 12 percent in 1978, 19 percent in 1979, and the rate of inflation has been kept down and it was 9 percent in 1980, and those are actual figures. I just use this to illustrate the point. Had the inflation been kept down to about 8 percent in each of these 3 years, farm net income from sales would have been $22.5 billion in 1982 rather than $4.5 billion. Those 3 inflationary years have cost farmers over $70 billion in net income during the last 5 years.

I might also add that between 1972 and 1980 the interest rate on nonreal estate farm loans went from 8.8 percent to 17.9 percent and farmers annual interest rate payments doubled from $7 billion to $16 billion. That was at a time when we had roaring, runaway inflation.

I just want to put that in there so we can examine this historically and with total economic balance. Right now the thing that hurts—and I hear most about in Iowa and I expect in other States it's the same—is the high interest rates. If you have time and you talk long enough, they talk about and examine the difference between financing on a cash flow basis versus the equity approach, which have different rules and which the financial world and the bankers have switched using. I'm not trying to fix blame. We haven't time for that.

So would you still say now, which of those two—you said, Mr. Harl, that you're not sure there is an answer and it's difficult and it depends on all that. Does anyone feel that one has more effect on farming than the other over a certain period of time? Inflation or high interest rates: Which is the most devastating?

Mr. Ross. Up until 2 years ago, I would have said it made no difference because interest was within a point or two of inflation, so you had a very small real interest rate. That situation has changed. We had 4-percent inflation and 12-percent interest. It went from two to eight. Historically, that has not been true.

Senator Jepsen. But why should that be devastating? If the interest rates are higher, we can understand that that——

Mr. Ross. We're talking about real cost of money.

Senator Jepsen. Well, if that range of inflation is down, the cost of production should be dramatically lower and that should help considerably, shouldn't it, if your prices remain pretty fair as they are now?

Mr. Harl. The cost of production really hasn't dropped so much although it's no longer increasing like it was. We were seeing sharp increases in fertilizer and chemicals and part of that was attributable to the petroleum problem—in fact, a fair amount of it was. Agriculture is so heavily dependent upon petroleum inputs indirectly through nitrogen manufacture, for example, and directly of course through the actual utilization, so that, yes, higher prices were impacting agriculture. We had a period when the cost of inputs was going up and it went up very rapidly, but then as inflation has come down, costs have plateaued. The costs are still about where they were per acre of putting in a crop. They haven't really dropped, but the increase is not there.

Senator Jepsen. Do you wish to say something, Mr. Davenport?

Mr. Davenport. No.

Senator Jepsen. Mr. Carman.

Mr. Carman. It's very difficult to make a choice between what I feel are two "bads." I think the high interest rates are bad and the inflation is bad. The preference is to have neither and hopefully we will get back to a situation like that.

There was a publication done by the Committee for Economic Development, I believe it was, back in the late 1950's and it had kind of a catchy title to it and it still applies. It referred to inflation as the cruelest tax. You can tax with inflation as well as our tax rules, so inflation is certainly not desirable. It encourages behavior that I don't believe is in our best long-term interest.

Likewise, high real interest rates have a lot of differential impacts on the economy—different allocations that you would have because of the use of capital and so on. So it's two bad things. I think it's difficult to try to trade off one against the other. Neither is desirable.

Mr. **Davenport**. Again it is just my perception because I'm not an economist. There are people who really like inflation because they happen to be at a place where their costs don't increase as rapidly as whatever the general price level or whatever benefits they have. Now they're usually very nervous people because they are like a cat on a hot tin roof that doesn't want to burn its feet. They have to jump around from place to place to keep their costs down.

I think some people, although they might tell you they really don't like inflation—I think there are some people who benefit significantly from it, and they hate to take the sort of unpublic posture that they like it. They won't say that.

Senator **Jepsen**. Examining that for a minute, would you say that senior citizens in our country would be opposed to inflation, or would they not be?

Mr. **Davenport**. I don't think you could do it by that kind of a breakdown. I would simply have to think——

Senator **Jepsen**. Those on fixed income?

Mr. **Davenport**. People who are on fixed incomes would not like that.

Senator **Jepsen**. And those who are young, starting families, middle to low incomes, they probably would name it public enemy No. 1 yet, wouldn't they?

Mr. **Davenport**. It just depends. If you're relatively young, you may well think that your wages or your salary or your income is going to increase more rapidly than whatever your costs are, whether it's personal consumption or business costs or anything else. You may also feel that if you buy certain kinds of assets that they will do better than the cost of living. It's not so clear.

But I think the people who are on a truly fixed income, they obviously, because in any kind of inflation you would expect that some costs would go up, and they would be in trouble.

Mr. **Harl**. I would offer just one observation, and that is that the young couple, I think, until they buy a house, view inflation in distinctly unfavorable terms because housing is just out of their grasp. As soon as they've managed to buy a house, they are leveraged and leveraged pretty substantially. From that time on they see the house value going up and their earnings are going up with inflation, I think they generally are converted over. In the 1970's, people came to believe that they had to adapt to a world of inflation and then, of course, we changed the rules of the game. And that's what we're living with now.

Senator **Jepsen**. Well, I don't know what you mean by "we changed the rules." What changed the rules?

Mr. **Harl**. What I mean is that the Federal Reserve, principally, decided to move toward, if necessary, a tight money policy and high interest rates to reduce the level of economic activity and bring the economy out of inflationary expectations. It takes a while to do that, for one thing, and we are grinding through that process.

Senator **Jepsen**. What chances are there for lower interest rates if inflation is out of control?

Mr. **Harl.** Reduced nominal rates or real rates? If inflation is out of control you expect the stated interest rate that people are paying to be dancing along at a little bit higher than the inflation rate. We have had a few periods when the actual charged rate was less than the rate of inflation, so that the real rate was really negative. We had a few times like that in the 1970's, but usually it has been a little higher. But the actual real rate of interest was very modest during that period and you expect that with inflation continuing.

Mr. **Ross.** You mentioned people on fixed incomes and I find very few of those. Social Security goes up with inflation and the cost of living for the elderly most of the time, because medicare has paid for that increased medical expenses, some of them own their own houses so the housing cost will rise some, but not building cost, and there was some discussion about having a separate cost of living to index those very few, which brought in all kinds of letters I guess. But there's quite a few people that when they retire they have a small pension and social security and maybe a little savings and you would be surprised how large those savings accounts are now. So I can't find that person on a fixed income. Social security has been kind of a leveler and medicare has been a leveler. There's been a lot of things that helped.

Senator **Jepsen.** I hear the comments made here and others have told me several times in the last few weeks as I've traveled in Iowa, they say, "What's the matter with a little inflation? You know, I kind of like to have it. At 12 or 13 percent, I was working and things were going pretty good."

Now the last 20 minutes here, if we step back and reflect on it, is probably why the Feds are getting the shellacking they are getting—deserved or not deserved, and I will not get into that, but they are—and it's a very popular topic. We're saying that the deficits are the cause of high interest rates. I hear that, but I would also point out that as the deficits have gone up in the last few years, the interest rates have halved. I know you have an answer for that, Mr. Harl.

Mr. **Harl.** The nominal rate has dropped, Senator. The nominal rate has dropped from something in the 20- to 21-percent range down to presently about 14 or 15 percent. The real rate—the inflation adjusted rate—is so very much higher than it was during any of that period. That's what is really a problem and, of course, the effects also of loss of collateral value has exacerbated the overall financial difficulty.

People can live with about anything if you give them a chance to adjust. They did adjust during the 1970's and Government, investors, and others adjusted to inflation. Now they are in the process of adjusting to a world of low inflation and eventually they will. It's the instability that upsets applecarts.

Senator **Jepsen.** There's no question about that. I think it leaves something begging. You mentioned, Mr. Ross, or alluded to the fact that there were inflationproof programs to a degree—Social Security, civil service, and military retirement. After building those things in, that is one of the reasons why the deficits have catapulted into outer space. After awhile when you get 36 million people, as we have on Social Security, and you continue with two cost-of-living increases a year, that amounts to big bucks. As they continue to grow and as inflation continues to mount, the farmers are doing their financial figuring based on inflation. So we had high inflation for about the last 10 years and it has brought us to this point we are at, where we have to face the consequence of this deficit it caused.

Mr. Davenport is anxious to say something.

Mr. DAVENPORT. No; I'm not. I'm just trying to hear.

Senator JEPSEN. Did you have anything you wanted to say?

Mr. DAVENPORT. No.

Senator JEPSEN. I'll try to talk louder.

Mr. DAVENPORT. It's not your problem.

Mr. ROSS. I think when wages are tied to union contracts employees are somewhat tied to inflation. If someone bought their house 5 years ago and the payments are $500 a month and if it was a fixed interest rate, those payments are still $500 a month. His wages went up 25 percent. That portion of the cost of housing didn't increase. So inflation gave a lot of people a real increase in income. They liked that. The guy who didn't have a house didn't like that.

Senator JEPSEN. What would you recommend the Fed policy be, Mr. Harl?

Mr. HARL. I arrived in Washington late last night and wasn't aware until this morning that the chairman had submitted his resignation, so perhaps I shouldn't comment too much about that.

Senator JEPSEN. You're talking about the economic adviser, Marty Feldstein. Paul Volcker is the one I'm talking about.

Mr. HARL. All right. I think the Federal Reserve policy is a sound policy if we are serious in the long term about wringing inflation out of the economy. I think it's the only show in town, really, in terms of bringing us to a world of sharply lower inflation on a long-term basis, and I think it's a policy we can live with.

However, I'm not certain we can live with that policy and with deficits that are keeping us stretched to the point where it's almost breaking people who are borrowing heavily. I think it's the combination of that policy and the budget deficit that has left us with a very dangerous situation. I have great sympathy for the Federal Reserve on this, even though I think, as we've discussed the last few minutes, you can make an argument that maybe their ultimate target may be a lower rate of inflation than a lot of people would personally approve, but I think if we're going to follow that policy their way of going about it is one of the few ways it can be done.

Senator JEPSEN. Mr. Ross, do you have anything to add? Do you have a comment on what you think the Fed policy ought to be?

Mr. ROSS. I don't have anything to add.

Senator JEPSEN. All right. Mr. Davenport.

Mr. DAVENPORT. I have nothing to say.

Senator JEPSEN. Mr. Carman.

Mr. CARMAN. I agree with Professor Harl's comments on that. It's a very difficult situation, but I think, as he said, if you're going to keep inflation down, you're going to have to follow that kind of policy.

I might comment that it's had some other impacts as well in agriculture with the strength of the dollar and the difficulty that we have had in some of the export markets as a result of that. It's something that California feels very much in terms of many of the products that we're concerned with there; in terms of some of the fruit and nut crops where close to half of them are exported. It's been difficult in those crops.

Senator JEPSEN. The deficit has dropped rather dramatically, as you know, over the last 5 or 6 months it is 13.5 percent less today than it was a year ago at this time. The reasons for that I will list very quickly. There are a number, most of them on a plus side of things in the big national picture—increased productivity, lower unemployment, our gross national product growth was minus 1.3 in 1980 and it started out the first quarter of this year at 8.3.

How much of this real interest rate—the difference between inflation and what you have to pay—what will happen when the financial community—which in my opinion at this time does not believe or have confidence that the budget and the deficits and all the things that go with them are under control—when the financial community believes that the budget is under control? What difference will that make in interest rates, in your opinion? There is a general consensus that there's a certain number of points that are psychologically involved here.

Mr. HARL. We're talking here about the price of credit. With a substantial closing of the deficit, at least the Treasury would not be participating in the money markets to the extent they are presently. The docketed amounts of borrowing would be sharply less. I would anticipate that if we were able, through a combination of means, either through the taxation route or through reduction of expenditures or both, to reduce the deficit very sharply, I would anticipate a reduction in the real interest rates.

Senator JEPSEN. We have reduced the deficit pretty good in the last 3 months and the interest rates are edging up. What's happening?

Mr. HARL. Well, each of us, I'm sure, has an explanation. As the economy has come back—and that's part of why we have some additional revenues coming in—as the economy has picked up steam, the private sector is borrowing more money. They are in the money markets, too. So is the Treasury. As a consequence, what we have is an increasing competition for money. In order to prevent that from causing inflation to come back again, we see the Federal Reserve continuing to maintain a tight hand on money. So I think we can expect interest rates to go even higher.

The portent, however, is that as it goes higher, it chokes off economic activity, first among the most interest-sensitive sectors—and housing and agriculture are adversely impacted, for example. That would eventually lead to some decline in economic activity. So what we would anticipate would be a recession.

If we do not get our deficit situation in order on the upward side of the cycle, then the appetite for doing anything about it on the downward side of the cycle is likely to be even less. So my greatest fear is that we may push ourselves back into a recessionary condition and then we come out of it with an even larger deficit than we have today. So it's the dynamic that is the greatest concern and it has international dimensions as well, of course, as we see pressure now in capping interest rates internationally on loans. I think it's an integrated question. We're an integrated economy. It used to be that agriculture was, to a degree, separate from the rest of the economy in terms of macro policies. Some of the most important policies affecting agriculture now are policies that lie outside of traditional farm policy. Important policies now come from the Treasury Department, the State Department, and the Federal Reserve. I think we need to realize that. Farm policy is no longer a separable problem.

Senator **Jepsen**. Mr. Ross.

Mr. **Ross**. Deregulation, I think, had a lot to do with it. It used to be if you had money in the bank, there were all kinds of limits on how much they could pay. Brokerage firms did not have the liquid capital accounts and all the fine things in life. When brokerage firms, just 3 or 4 years ago, started into liquid capital, they drained a lot of money out of the banks and invested it in higher yielding securities than normally what banks would do. Then they deregulated the banks and they could buy money at whatever they wanted to pay for it. They're willing to inventory money at a fraction of 1 percent under Government bond rates for the opportunity to loan it to someone at 13 or 14 percent. If you look at the loan ratios in many banks, they have dropped dramatically. It seems odd that when they were 78 percent loaned out, their rates were a lot more in line with the Government bond rates. Now they're 50 percent loaned out, their spread is 5 points.

Senator **Jepsen**. Mr. Davenport.

Mr. **Davenport**. This is intuition, sort of off top of the head. First of all, for most lenders to get any return at all from loaning money, the nominal interest rate has to be twice what the inflation rate is. Most, or a good share of, lenders of money are in relatively high tax brackets, and that means that 50 percent of the nominal interest rate goes immediately for taxes. So if you have a nominal interest rate of 12 percent, the aftertax return may be only 6 percent; and if you have an inflation rate of 6 percent, these people are just staying even.

I think that in the early 1970's, a lot of people in the borrowing position hadn't really understood that because they were getting 4, 5 or 6 percent and inflation was running 2 or 3 and they were staying even. But when inflation went to 14 percent, they suddenly found that even at 18 percent interest rates, they were losing money. I think that the sort of high rates now are in part explainable by the fact that such investors do not want to lock themselves in that position and they are very concerned that the inflation rate—which we talk about 5 percent being a great improvement and it may be, but historically in this country—I'll leave that to Neil—but if we're talking about ratcheting upward from that, then on a relatively long-term basis, they're going to say, "Gee, I'm going to have to have twice something more than five."

Senator **Jepsen**. Well, instability, I would suggest, plays a big role in the monthly change in the money supply and there is just a great dearth of facts to support that. The chart I have here indicates the monthly supply of money since 1978 through 1984, and it's a pretty jagged line. This psychology of uncertainty regarding the course of monetary policy and the supply makes folks tend to keep the margins up.

Time and time again we, on the committee, have heard from people who are specialists in the monetary field—economists, advisers to the President, Mr. Volcker, and other people. When you ask a question of why you can't get stability built in there, that 3.5 to 5 percent or so of money growth, you do not get a satisfactory answer. Just keep it in there and see if there is a difference from when they have the pedal down all the way to the floor and we have 18.5 percent money growth and then they have the brake all the way through the floor, as we did for a while, and it's minus 3 now.

I can share with you that when the panel is on and the record is being made, to the extent they're working on that and they're making some great strides on it, but privately most everyone that deals with that has told me that it's very, very difficult, especially with the deregulation and the change in money definition. We have M1 and M2 and we had M1–1 and M1–2 and M2–2 and M3 and you have money interest markets and it used to be that M1 was the change in your pocket and the savings in your bank account and now they have things that aren't exactly pensions but they're money markets.

Frankly, they kind of say, "That's a good question, Senator. That's very difficult." And I say, "No, Congress is supposed to give answers like that, not the experts." But that's a big problem.

Do you gentlemen have any recommendations? This instability in the monthly change in money supply can be watched and it reflects the blipping of interest rates and everytime it blips, people say, "We're going to wait and see what happens, up or down." It's better to go down, but it continues changing. Any comment on that, Mr. Harl?

Mr. **Harl**. Senator, I would merely respond this way. I would say that we're dealing with two basic kinds of policies. We're looking at monetary policy at the moment. The other side of the coin, of course, is the fiscal side. We have to change the things that we can change. I am a strong believer in one way or another trying to reduce the budget deficit through a combination of increases in taxes. I think we have to revisit much of the Economic Recovery Tax Act of 1981, and I think depreciation is one example, leasing is another, and some provisions that have proved to be clearly massive sources of loss of Federal revenue should be examined. I think we have to get our fiscal house in order and then hope that the Federal Reserve will pursue appropriate policies that relate to that kind of a fiscal situation.

So that would be my suggestion, Senator, that we look very carefully at the fiscal side. I am a believer in the independence of the Fed and believe in general we are well-served that way. Sometimes we're uneasy about that, but I think probably that's the best way to leave it.

Senator **Jepsen**. Well, I thank all of you for your testimony and I wish we had more time. If you have any additional thoughts, if you would please submit them to us, we would welcome them and I would like to close with the panel with one final question, if you could answer it as briefly as possible.

Starting with you, Mr. Carman, what kind of financial advice would you give to young farmers just starting out and what kind of financial advice would you give to established farmers? Briefly, if you please.

Mr. **Carman**. I guess the farmer starting, he would have to be very concerned with borrowing and with cash flow. I would probably be advising him, in order to capture some of the economies of size, to be seriously considering renting land rather than buying land. Those kinds of things would go into the advice.

Senator **Jepsen**. And to the established farmer at this particular time, if he were asking for financial advice, what would you say to him?

Mr. Carman. I think if he's in a good sound position right now, given the prices of some of the assets, he might be thinking about a little expansion if he felt that he could cover it, at least in some of the situations that we have.

Senator Jepsen. Mr. Davenport.

Mr. Davenport. I would tell the beginning farmer, "See your tax adviser." New farmers find out how they can capture the tax subsidy and put the farm operation together with the subsidy from the tax law.

To the established farmer, I would tell him what I sometimes tell my beginning income tax students: In the tax business the purpose is to put off until tomorrow the taxes you should pay today, for tomorrow you may die; and in the tax world that's not all bad. Death is absolution from all of the taxes deferred over the years.

Mr. Harl. The beginning farmer should watch exposure to capital commitments, watch the line of credit and try to keep that as low as possible, No. 1.

No. 2, to engage in production in accordance with the most careful planning with respect to the economic relationships involved. This is a time when a premium is placed on management.

No. 3, to develop a relationship with a lender, a relationship that is hopefully a stable one. I think it is awfully important for the beginning farmer to be close to a lender and build up confidence. I think that stability in lending is just about everything.

I just finished a book about a month ago and the first chapter is devoted to an introduction to this problem and I say there are three things in lending that are important—stability and stability and more stability. That means you don't push money as a lender in good times nor do you pull back arbitrarily when times are not good. There's a side of this for the borrower, also. The borrower must play fair and square and open with the lender. I think that's an awfully important third point.

Senator Jepsen. And the established farmer?

Mr. Harl. Much the same advice. The irony in all this is that we probably are approaching the time when investments in land probably are wise. We may be seeing the lowest value perhaps in some years. So for the established farmer who can afford to take the risk and not jeopardize that person's financial situation, I think if they're willing to expand, to bring in a child, this may be approaching the time when that might be feasible. But they should watch their exposure because it's a dangerous era to be extended.

Senator Jepsen. Mr. Ross.

Mr. Ross. For the beginning farmer, I would suggest that he have accrual basis projections prepared for the balance sheet income statement and cash flow to determine out of the alternatives available what's his best bet.

For the established farmer, 30 percent not in debt, I would advise the same thing. For those with money, planning for the future, including your kids, and if you have no kids, what do you want to do with the whole package.

Senator Jepsen. I thank you.

Is there anyone who has a closing statement he would like to make?

Mr. **Harl**. Could I just say, Senator, I am very grateful for the opportunity to appear and to have a far-ranging discussion. We appreciate that very much.

Mr. **Davenport**. I thank you for the opportunity to appear.

Mr. **Carman**. One thing that I had in mind in my formal statement which I'd like to say again is that I think it's really time to start trying to get a little coordination between tax policy and agricultural policy and that would be one thing that I would like to leave with you. I thank you for the opportunity to testify.

Mr. **Ross**. Quite a few things in the tax area that are meant to correct some other segment of business apply to farmers and it has caused lots of problems. I'm happy that you are looking at farmers as a separate part of that tax bill. The Congress and the Internal Revenue Service have a tendency to overkill a lot of times when they are attacking a specific problem.

Senator **Jepsen**. I thank you. In the tradition of the Joint Economic Committee, our hearing today has been most informative and insightful if not thought provoking. While we may not be able to arrive at any consensus on all the topics, there were certainly an absolute consensus when I asked whether you wanted the capital gains to go from a year to 6 months and the answer was uniformly and resoundingly, no. However, I am sure we all agree that sound monetary and fiscal policies are conducive to a healthy agricultural sector as well as a healthy U.S. macroeconomy.

Our witnesses today have done an excellent job in showing how our Federal tax policy affects both agriculture and the entire economy. They also have pointed out some of the short-term and long-term effects of our tax policy. Mr. Harl has made the very observant remark that during this time of low farm income we should be very careful and hesitant in recommending tax law changes which would decrease after-tax farm income. Timing is just as important as content when it comes to tax law. We must strive to tie in all farm policy programs including commodities, with tax policy, as an integral part of the next generation farm policy. I think that a new attitude has been generated and created in the last couple of years. We must develop one that's based on consensus with everybody being involved, not in conflict or separately, and that includes taxes as well as soil conservation and wildlife preservation, and processing as well as producing as well as distributing, and on and on and on.

Today, the Joint Economic Committee or its members are not endorsing or opposing any proposals to alter the Tax Code. Our intention, and our accomplishment by virtue of the excellent testimony presented here this morning, was to make an inquiry into the effects of taxation on agriculture. With this foundation, we can appraise future tax proposals with the foresight given us by this hearing. And I thank all of you for your contribution to that effect.

Our witnesses are reminded of their invitation to include additional information in the record if they so desire.

With no further business before the committee, I thank you all for coming and I wish you a very safe trip home.

This committee is adjourned.

[Whereupon, at 12:10 p.m., the committee adjourned, subject to the call of the Chair.]

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